FOOD-PRODUCTION ACT, 1919

HEARINGS

BEFORE THE

COMMITTEE ON AGRICULTURE

HOUSE OF REPRESENTATIVES

SIXTY-FIFTH CONGRESS

SECOND SESSION

ON

ESTIMATES OF APPROPRIATIONS REQUIRED TO CARRY OUT, DURING THE FISCAL YEAR ENDING JUNE 30, 1919, THE PURPOSES OF THE ACT APPROVED AUGUST 10, 1917, ENTITLED "AN ACT TO PROVIDE FURTHER FOR THE NATIONAL SECURITY AND DEFENSE BY STIMULATING AGRICULTURE AND FACILITATING THE DISTRIBUTION OF AGRICULTURAL PRODUCTS" (40 Stat., p. 273)

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FOOD-PRODUCTION ACT, 1919.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Tuesday, April 23, 1918.

The committee met at 10.30 o'clock a. m., Hon. Asbury F. Lever (chairman) presiding.

The CHAIRMAN. We will take up this morning the estimates for carrying out during the next fiscal year the purposes of the food-production act of August 10, 1917. The Department of Agriculture has furnished us a detailed description of the manner in which the funds are to be used, and, if you will turn to page 3 of this book of estimates, we will begin the hearing this morning. Mr. Harrison, of the Secretary's office, who is present, will take charge of the hearings and introduce such representatives of the department as may be prepared to discuss the various items. I hope, gentlemen, that we will follow the rule of keeping our questions right to the point, so that we can finish these hearings as soon as possible; I hope, some time this week.

Mr. HARRISON. Mr. Chairman and gentlemen, we transmitted the estimates in the usual way, through the Secretary of the Treasury to Congress. The provisions of the food-production act, as you know, extend throughout the period of the war, but the appropriations provided by section 8 expire on June 30. The phraseology of the bill making appropriations for the next fiscal year, as suggested by the department, is given on page 2 of the pamphlet before you.

Mr. ANDERSON. I would like to ask if it is the intention to make the residue of the agricultural appropriations available for next year?

Mr. HARRISON. No, sir; they will lapse, Mr. Anderson. I assume that the committee will want to discuss the items in the order in which they appear in this pamphlet. Dr. Mohler is here and will take up the Bureau of Animal Industry first.

I.

FOR THE PREVENTION, CONTROL, AND ERADICATION OF THE DISEASES AND PESTS OF LIVE STOCK; THE ENLARGEMENT OF LIVE-STOCK PRODUCTION; AND THE CONSERVATION AND UTILIZATION OF MEAT, POULTRY, DAIRY, AND OTHER ANIMAL PRODUCTS, $1,269,655.

BUREAU OF ANIMAL INDUSTRY.

STATEMENT OF DR. JOHN R. MOHLER, CHIEF OF THE BUREAU OF ANIMAL INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

Dr. MOHLER. Mr. Chairman and gentlemen, since the department prepared the emergency estimate for the eradication of cattle ticks under Item I, the Senate has increased the allotment for tick eradi-

cation in the regular agriculture appropriation bill by $129,580, and the House has concurred. Therefore it is the wish of the bureau to have the increased allotment of $129,580 subtracted from the estimates which we made in the proposed stimulating of agriculture bill. We merely wish to balance the item, so that this amount deducted from our original estimate of $191,190 will amount approximately to $62,000, which we are now requesting for stimulating agriculture along the lines of tick eradication.

The CHAIRMAN. Do you want to make any other statement than is contained in the book of estimates as to the situation with reference to the cattle-tick work?

Dr. MOHLER. The statement here, coupled with the statement made in December before this committee, would cover the entire subject. Our plan is to increase the amount of work we are now doing on tick eradication in the same States where we are working at the present time. We are working along two lines, preliminary demonstration work and active systematic dipping; that was fully explained in December, when I last appeared before the committee.

Mr. ANDERSON. How is the appropriation divided between the two departments?

Dr. MOHLER. We are exhausting the entire tick appropriation of the general appropriation bill this year; but there will be a small amount returned to the Treasury from this year's tick allotment in the current stimulating agriculture bill.

Mr. ANDERSON. What I was trying to get at was, What is the proportion of the demonstration work, and what is the proportion of the eradication work?

Dr. MOHLER. There is no hard and fast division made. Various counties in the South are taking up tick eradication by voting. Some counties voted for tick eradication, and some failed to favor it. In the last four months Alabama has had a number of votings by the counties, and a majority of the counties have voted against it. In Texas three counties out of eight voted against tick eradication. Preliminary educational work has been done in all these counties, but now we will confine our work to systematic dipping in those counties that have voted affirmatively. We do not go into the counties that do not want our cooperation, and it is, therefore, hard to say how much we will expend on each of these lines of work during any particular period. In Louisiana we are now doing active systematic work entirely, and the same is true of South Carolina. On the other hand, North Carolina, just the day before yesterday, sent word that one county, where we were attempting to do systematic work, had decided against it.

Mr. ANDERSON. What advantage is there in carrying on this work as a national proposition if some counties vote against it and you have got to leave them alone? They simply become centers for the spread of the tick through your cleared area, do they not?

Dr. MOHLER. No; not entirely. Those counties that vote against it remain in quarantine; they can not have any of the benefits of the neighboring counties where the tick has been eradicated. It is not very long before they see the advantages of tick eradication.

Mr. YOUNG of Texas. Does the State put a quarantine on them?

Dr. MOHLER. Yes, sir; we have recently taken out Dallas County in your State from the quarantine, and the State of Texas is now

enforcing a quarantine on all of the counties bordering on Dallas. The latter is being used as an object lesson in that particular area. The other counties are seeing the benefits accruing to the cattlemen in the free zone.

Mr. LEE. In other words, they will not allow cattle from the tick counties to go into Dallas County?

Dr. MOHLER. They will not allow tick cattle to go into Dallas County.

Mr. YOUNG of Texas. Did you mean that?

Dr. MOHLER. Yes. Dallas County is now taken out of quarantine.

The CHAIRMAN. Are there any further questions on that, gentlemen?

Mr. YOUNG of Texas. About a year ago the Texas Legislature passed a statute dividing the State up into zones, and my recollection is that the time limit given to the State in which to clean itself up was 1921 or 1923.

Dr. MOHLER. Yes; 1922.

Mr. YOUNG of Texas. You are cooperating in the zones?

Dr. MOHLER. Yes, sir; the first zone does not come in until 1919; in 1921 the second zone comes in; and in 1922 the third; but some of the cattlemen in these counties that will not be affected until 1922, are anxious to get out before that time. In fact, several counties have voted to take up this work immediately, but it is optional on the part of the cattlemen at this time.

Mr. YOUNG of Texas. That law in Texas is mandatory, and the whole State will be forced under this statute when they reach that zone to begin this eradication work; and your work is in cooperation as these different zones are reached; and here and there, where a county is participating and undertakes to have a vote and undertakes the work before it reaches that zone, you go into that county and cooperate and throw quarantine lines around them.

Dr. MOHLER. Yes, sir.

The CHAIRMAN. Mr. Young, have you made any appropriations for that in the State?

Mr. YOUNG of Texas. Oh, yes. It is mainly done as a community cooperative matter.

Mr. WASON. What proportion would the county pay?

Dr. MOHLER. Usually fifty-fifty. Some counties have had more men than the department has had. There have been more men and money furnished by the counties and States in the last few years than by the Department of Agriculture. In this section you are speaking of in Texas around Houston recently there have been seven counties that voted for tick eradication; and, of course, we will go in there and help them eradicate ticks before the requirement of the law for that particular zone.

Mr. YOUNG of Texas. I am familiar with the Houston situation. Most of their cattle come from northeast Texas, and I was wondering how they would get the cattle there, what source of supply they would have. Very few of the Texas counties have had tick eradication.

Dr. MOHLER. The entire western part of Texas is free of ticks. The blue part on the map [indicating] is now tick free, and a large part of the drought section is tick free. There is only one county—Angelina County—where the election failed. In Houston, Hardin,

Montgomery, Harris, Galveston, Tyler, and Jefferson the elections were all satisfactory for immediate tick eradication.

The CHAIRMAN. If there are no further questions, please take up the next item on page 3, "Eradication of hog cholera." You seem to have no change in the allotment there.

Dr. MOHLER. The department is now requesting that the same allotment be made for the emergency work of 1919 as was made in 1918, namely, $202,965. This will be added to the amount of money appropriated in the general appropriation bill, which this year amounts to about $246,000.

Mr. ANDERSON. What plans are you adopting in regard to that?

Dr. MOHLER. In a brief statement I will show this map [indicating] to indicate that the intensive work in hog cholera is being done in the corn belt, where most of the hogs are produced. The States here marked in blue [indicating] show where we are doing the principal amount of hog-cholera control work. The States where the red marks are located show where we are doing educational work solely. Down here in Georgia and Alabama we are doing intensive control work in these small zones marked in blue, and in these blue areas in Idaho and in certain parts of Oklahoma and Texas similar work is being done, but in this corn-belt region we are doing State-wide intensive work in the eradication of hog cholera, which, of course, is in cooperation with the State officials.

Mr. HAUGEN. Please give the names of the States for the record.

Dr. MOHLER. The intensive work on hog cholera is being done in Ohio, Illinois, Iowa, Missouri, Nebraska, Kansas, and parts of Michigan, Virginia, North Carolina, Georgia, Alabama, Texas, Oklahoma, and Idaho. In the remaining sections the work is confined entirely to educational and demonstrational lines in cooperation with the county agents and extension forces of the States.

Mr. YOUNG of Texas. In what part of Texas is that work being done?

Dr. MOHLER. Around Fort Worth and the Dallas section, and in the pink boll worm area near the Gulf. The State extension agents and live-stock sanitary authorities are cooperating with us.

Mr. YOUNG of North Dakota. What about the other States?

Dr. MOHLER. We are not doing anything in the States where the map does not show any marking at all, as the New England States, Minnesota, Wyoming, Washington, Nevada, and Arizona. We are asking for this increase in order that we may cover the entire 48 States.

Mr. HAUGEN. Will you state what work is being done in Iowa?

Dr. MOHLER. In your State, Mr. Haugen, we have a force of 17 inspectors who are cooperating with the State veterinarian and extension officials. They are tracing all reports of outbreaks that have the appearance of hog cholera. They go to certain sections where the disease has been reported, and they quarantine the farms, if found infected, and sometimes the districts where the diseased animals are located. Then they recommend the use of the serum and virus treatment on all the exposed hogs. They clean up the infected premises, and tell the farmers of the neighborhood what has occurred and what they should do to protect themselves from similar losses. They also frequently vaccinate the hogs in the neighborhood in order to prevent the spread of the disease from the original premises. In

Iowa there have been very few secondary outbreaks. The men are located at strategic points throughout the State, and as soon as they hear of the disease they go to the infected farm, and as a result of their promptness secondary outbreaks have been infrequent.

Mr. HAUGEN. Were there any outbreaks of hog cholera in Iowa during the past year?

Dr. MOHLER. Oh, yes; but there has not been nearly so much hog cholera this year as there was last year. There have been more outbreaks in the western part of Iowa than in the eastern part.

Mr. HAUGEN. I believe some one stated at a previous hearing that there had not been any outbreaks this year.

Dr. MOHLER. When I was here in December I spoke about the outbreaks in the western part of Iowa and of so many cases having been traced to the Sioux City stockyards. Animals that came in for immediate slaughter were sent out as stockers and feeders.

Mr. HAUGEN. How many outbreaks have been reported in Iowa during the past year?

Dr. MOHLER. In October, 1917, there ware 511 outbreaks; in November, 353; in December, 207; in January, 1918, 217; in February, 58. The report for March has not yet been received.

Mr. HAUGEN. You have it by States?

Dr. MOHLER. Yes; we get the monthly reports of the number of outbreaks in these various States.

What I have described indicates the principal work we are doing in the intensive line. When it comes to the educational and investigational work in the various States we are working with the county agents, keeping them informed on hog cholera, teaching them what to tell farmers about the character of the disease, the methods of its spread, and what to do after the disease has been found. Our inspectors also address meetings informing the farmers of the value of hog-cholera serum and the advantages of sanitation and disinfection. Stereopticon views are shown.

Mr. HAUGEN. It is pretty much educational work at present?

Dr. MOHLER. Yes, sir.

Mr. HAUGEN. How many people have you employed?

Dr. MOHLER. We have 170 inspectors at the present time scattered through this area.

Mr. HAUGEN. They are all veterinarians?

Dr. MOHLER. Practically all veterinarians, though a few are not.

Mr. MCKINLEY. You state in this book that you propose to extend the campaign into five additional States. What are those States?

Dr. MOHLER. New York, Pennsylvania, Minnesota, and two of the New England States.

Mr. MCKINLEY. You do not know what two?

Dr. MOHLER. No; I do not. Massachusetts has a very good system of her own. We have offered cooperation to her State authorities, but they have the situation very well in hand and they prefer to have all the work rather than divide it. There is no reason for us to go in there, because they have sufficient funds and men to suppress the infection in any territory where the disease occurs.

The CHAIRMAN. If there are no further questions, please take up the next item, on page 4, item 3, "Eradication of abortion, influenza, strangles," etc. There you have an increase of $113,607 over the present appropriation.

Dr. MOHLER. The estimate of $175,000 is largely an apparent increase, because we have here deducted from the allotment of 1918 the amount of money appropriated for tuberculosis in the current stimulating-agriculture bill. Owing to the fact that an increased appropriation totaling $500,000 was given by the House and Senate in next year's general appropriation bill, the $59,400 which was included lase year in the stimulating-agriculture bill has been deducted.

The CHAIRMAN. How much is that now?

Dr. MOHLER. $59,400. That should be added to the $61,393, because of the fact that this amount was included in this bill last year for tuberculosis work. We have deducted this $59,400 now because of the increase for tuberculosis that we will have next year from the general appropriation bill. The remaining increase in the estimate for 1919 is desired in order to do work on influenza and strangles for the Army. As you probably know, the Army has had some severe losses as a result of influenza and strangles, or what they call shipping fever, in horses purchased in the West and sent to remount stations in the South and in States along the Atlantic coast. We now have some money from the allotment of 1918 which we are using in cooperation with the Quartermaster's Department to have these horses examined at the various stockyards and feeding stations along the road, so that as soon as a horse gets sick our men remove it. We are merely cooperating with the War Department. We have no rebulation regarding these diseases. The War Department has a regulation requiring that no purchases shall be made except of animals that are healthy and which have passed through stockyards that are clean and sanitary and which are shipped in disinfected cars. We are using our men to carry out these regulations of the Quartermaster's Department.

Mr. ANDERSON. They have a very large force of veterinarians; what are they doing?

Dr. MOHLER. They have a very small force of veterinarians in the Quartermaster's Department. The Surgeon General has a large force of veterinarians who are caring for the animals after they reach the camps, forts, and posts. You must remember that these horses I am referring to are not Government horses, but are owned by contractors, and they are assembled at these various points out in the West. They come in to Pueblo, Topeka, Grand Island, Denver, and points along the road, and are not purchased by the Quartermaster's Department until later; but the horses are exposed to disease in these contract and sales stables; and our men are making these owners, by appealing to their patriotism, consent to the disinfection of their barns. Their mangers are cleaned up and their water troughs disinfected every week. That is all before the horses are purchased by the War Department.

The CHAIRMAN. What is the disease of strangles?

Dr. MOHLER. It may be described as something simulating mumps in children. The glands of the neck of the horses swell up. It is a febrile disease of young horses. The younger animals are also considered to be the most desirable by the War Department.

Mr. LEE. It is not a new disease?

Dr. MOHLER. No. On account of the concentration of horses at central points, there has been a great deal more of the disease since

the war began than before. In fact, it started to spread rapidly when the English, the French, and the Italians began to buy horses in large numbers in this country. It is just like any other contagious disease—the more the animals are crowded together at one point, the quicker the disease spreads, and there have been enormous losses on account of the infection they have picked up en route from the West.

Mr. HAUGEN. It is what is known as distemper?

Dr. MOHLER. That is another name for it.

The CHAIRMAN. What is influenza?

Dr. MOHLER. Influenza is a disease analogous to our influenza of the human family, and, like the grip, it has very many complications. It has an intestinal complication, a nervous form, a muscular form, and a form that affects the lungs, which is very similar to grip in the human family, where you can have all these various complications. When influenza is complicated with pneumonia the majority of the animals die.

The CHAIRMAN. I was interested in the statement that in Denmark a large per cent of the horses have tuberculosis. Do you find tuberculosis in this country among horses?

Dr. MOHLER. No, sir; and largely because our conditions are entirely different from those in Denmark, where they feed their colts on milk. They find tuberculosis in horses in Denmark as a result of feeding milk to the colts.

Mr. LEE. Does your horse book give a remedy for this trouble?

Dr. MOHLER. Yes, sir; it is well described there. As a result of our work, which only started last fall, the Quartermaster Department and some of the other officials have been very much pleased with the results. Last November and December the death rate from these shipping fevers amounted to almost a million dollars' worth of horses a month, but that has been decreased considerably as a result of getting rid of these diseases at their source.

Mr. WILSON. When we were considering the bill in the House for taking away the garbage and using it for feeding pigs one objection raised to it was that that kind of food caused tuberculosis in hogs. What do you say as to that?

Dr. MOHLER. That may be true, but the relative danger of tuberculosis from feeding that kind of garbage compared with the value of the garbage as a food, as a general proposition, is very small. I would much prefer to make use of the garbage and take a chance on the slight percentage of tuberculosis that may occur.

Mr. YOUNG of North Dakota. What about the garbage that comes from the hospitals?

Dr. MOHLER. At the cantonments?

Mr. YOUNG of North Dakota. No; in the District of Columbia.

Dr. MOHLER. There is a danger, but I do not think that the danger should be considered in the same proportion as the advantages of feeding hogs on garbage.

Mr. MCLAUGHLIN. Would that be covered by Federal inspection?

Dr. MOHLER. Yes, sir; the hogs that are slaughtered under Federal inspection are very carefully examined, and those affected with tuberculosis are disposed of in accordance with the amount of the disease found.

Mr. McLaughlin. So there would be no particular harm, would there?

Dr. Mohler. From the public health standpoint, no; and from an economic standpoint it is of more value to feed this garbage under present conditions, because of the small proportion of danger of producing tuberculous hogs.

Mr. Wilson. If this plan were adopted in the District of Columbia, would the hogs fed on garbage be slaughtered at places where this Government inspection takes place?

Dr. Mohler. That could be included in the law very readily, because there are a number of places that kill hogs that now have Federal inspection, like Bennings, Rosslyn, and Auths.

Mr. McLaughlin. Are there many that are not covered by Federal inspection?

Dr. Mohler. Only a few small slaughtering places, and they have inspection by District health officers. That is not a constant inspection, like the Federal inspection, but the health officer has several food inspectors that go around during certain periods when the slaughtering is being done.

Mr. McLaughlin. But at the smaller places is the inspection such as would disclose the presence of tuberculosis and eliminate those that were affected?

Dr. Mohler. I think you can rest assured that most of the hogs that would be fed on this garbage would come to the places that have Federal inspection, because most of the uninspected houses just slaughter calves and cattle, while 99 per cent of the hogs slaughtered in this vicinity are slaughtered under Federal inspection.

Mr. Wilson. People who just have one or two hogs in the back yard would not be likely to get the garbage collected by the city, would they?

Dr. Mohler. I should not think so.

Mr. McKinley. Under this bill the District would take charge.

Dr. Mohler. That is what they are doing on the District farm at Occoquan, taking the garbage from the jail.

Mr. Wilson. And those hogs would be butchered by some well-regulated plant?

Dr. Mohler. Yes; that could be included in the bill. Occoquan, where they are feeding the garbage to the hogs, is, I believe, under District regulations.

The Chairman. Are all the big slaughterhouses under Government supervision?

Dr. Mohler. Oh, yes, sir; but there are some little country slaughterhouses, like one in Tenleytown, which is not. They are under the inspection of the health department. They, however, are very few and far between.

Mr. Haugen. Are there many packing houses throughout the country without Federal inspection and supervision?

Dr. Mohler. There are none that are doing an interstate or export business.

Mr. Haugen. But there are many that are doing an intrastate business?

Dr. Mohler. Yes; a large number of uninspected plants are doing a local, intrastate business. We figure that we are inspecting about

60 per cent of the animals that are slaughtered in this country, and the other 40 per cent are taken care of by these small plants.

Mr. HAUGEN. And slaughtered without inspection?

Dr. MOHLER. Without Federal inspection. Some have city inspection; very few have State inspection. Pennsylvania has State inspection, but there are quite a number of cities, and they are increasing every day, that have municipal inspection.

The CHAIRMAN. If there are no further questions, please proceed to the next item.

Dr. MOHLER. The next item is on the production of beef cattle. The allotment last year was $15,000 but this year we are asking for $90,000 additional. Mr. Rommel, who directed this work in person in Texas and the Southeast last year, is present and I would like to have him speak about these next items.

STATEMENT OF MR. GEORGE M. ROMMEL, CHIEF OF THE ANIMAL HUSBANDRY DIVISION, BUREAU OF ANIMAL INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

Mr. ROMMEL. Mr. Chairman, the work that was done last year was done both with the regular fund for beef-cattle investigations and this emergency item of $15,000. Due to the efforts put forth there were something in the neighborhood of 150,000 cattle moved out of Texas into the Southeast and placed there for breeding purposes. Practically all of these cattle were bought outright, and the great majority were cows and heifers. The cost to the department of moving the cattle was less than $10,000. The $15,000 was used mainly for the follow-up work, keeping in touch with purchasers of these cattle to see that the cattle were handled properly during the winter and given the care necessary to keep them from loss.

Mr. MCLAUGHLIN. The Government did none of the buying?

Mr. ROMMEL. The Government simply did the supervising; that was all. We sent one man throughout the Southeast who called the attention of people there, through the agricultural colleges, railroads, and others interested, to the fact that cattle were dying in Texas or being slaughtered on account of the drought. At the same time we put a man in Texas who acted as receiver for the inquiries from the East, and then eventually we moved more men over into Texas. Those men were used as go-betweens.

Mr. HAUGEN. Those cattle were shipped for breeding purposes?

Mr. ROMMEL. Yes, sir. The breeding stock of Texas was being sacrificed on account of the drought.

Mr. HAUGEN. Where were they moved to?

Mr. ROMMEL. To Arkansas, Louisiana, and States east. They went as far east as Florida and Georgia.

Mr. YOUNG of Texas. How many were moved?

Mr. ROMMEL. It is not known how many there were altogether. We moved 150,000 head into the States I mentioned, but in addition to that they moved cattle into Oklahoma, Kansas, Arizona, and California, and shipped them to the Northwest, where pastures were suitable; but how many cattle went to the West and Northern States I do not think anyone knows. We know that large numbers of cows and calves were slaughtered at Fort Worth.

Mr. YOUNG of Texas. I understand that the State has sustained a loss of from three to four million head of cattle.

Mr. ROMMEL. I am inclined to think that is exaggerated.

Mr. MCLAUGHLIN. Loss by death?

Mr. YOUNG of Texas. They disappeared from the State, either by death, premature slaughter, or being sent out of the State.

Mr. ROMMEL. The loss by death was very greatly exaggerated. We know pretty accurately how many more cattle than normal were slaughtered at Fort Worth. That presumably was on account of the drought; but the number of cattle that actually died on the range has been very greatly exaggerated.

Mr. MCLAUGHLIN. Have you any figures indicating what the amount was?

Mr. ROMMEL. No figures that I could say were anything but guesses. The loss probably was something in the neighborhood of 5 per cent. I do not think it was more than 5 per cent in the drought-stricken regions, and the normal loss is somewhere between 2 and 3 per cent; but they are all guesses. Nobody had any count at all. The cattle moved out were not lost to the Nation; they have been retained for breeding purposes elsewhere.

Mr. YOUNG of Texas. The whole section is denuded of cattle. There are not any cattle out there. As you go out into the drier sections you will not find any cattle there at all.

Mr. ROMMEL. I have been in very close touch with the situation since it became acute, and there is no doubt that in the drought sections from 50 to 90 per cent of the cattle that were there two years ago have been moved out.

Mr. HAUGEN. Did you have in charge the work of taking a census of the cattle last year?

Mr. ROMMEL. No, sir. Do you mean the estimate made for the department?

Mr. HAUGEN. Yes.

Mr. ROMMEL. That is in the Bureau of Crops Estimates, under Mr. Estabrook.

The CHAIRMAN. What is the work you wish to do under this estimate?

Mr. ROMMEL. We wish to follow up the work we have started. We hope it will not be necessary to meet another drought situation, but we wish to place other men in the States to extend the educational work which we are doing there in the line of beef cattle work; also to increase our force so that we can conduct educational work in the corn-belt States and elsewhere on beef production, in cooperation with the agricultural colleges. The utilization of the available feed supplies is a big problem. The question is to show the farmer how beef production can be made profitable by utilizing feed supplies which are available. Last year there was an enormous crop of velvet beans in the South. There were not sufficient cattle to feed on these beans. There is always an enormous production of corn fodder in the corn belt which is not utilized.

Mr. HAUGEN. The fact is you can not make the cattle eat it.

Mr. ROMMEL. I am speaking of the fact that the cattle were not there.

Mr. HAUGEN. They will not eat it.

Mr. ROMMEL. They can put it in another form, in the form of silage.

Mr. HAUGEN. You would have to have silos?

Mr. ROMMEL. Yes, sir.

Mr. HAUGEN. Were the silos filled?

Mr. ROMMEL. I presume the men that had them filled them.

Mr. HAUGEN. Have you any knowledge as to that?

Mr. ROMMEL. I have not taken a census of it.

Mr. HAUGEN. You have not studied the subject, but you have some knowledge of whether they were generally filled?

Mr. ROMMEL. They certainly are generally filled; yes, sir.

Mr. HAUGEN. In that section of the country?

Mr. ROMMEL. Yes, sir.

Mr. MCLAUGHLIN. The use of silos is not advised in dairying sections?

Mr. ROMMEL. With beef cattle the use of silos is the solution of the beef production problem. There are a few sections where silos are not practicable. Northern Virginia is one of them.

Mr. HAUGEN. Do you consider that frostbitten corn makes good silage?

Mr. ROMMEL. It did, apparently; it apparently made very good silage.

Mr. MCLAUGHLIN. It does if it is put in at once.

Mr. ROMMEL. Of course, I can not give you an absolute, positive answer to that question. A number of experiment stations in the corn belt installed silos last summer to work that out exactly. The Illinois experiment station has a battery of silos, and the results obtained from those will be available within a comparatively few months.

Mr. MCLAUGHLIN. Eight or 10 acres will fill a fairly good silo. will they not?

Mr. ROMMEL. That would give you somewhere in the neighborhood of 100 tons, if you have a good crop.

Mr. MCLAUGHLIN. They have but one silo on each farm generally? They hardly ever put more than one on each farm?

Mr. ROMMEL. Some men have a greater number.

Mr. MCLAUGHLIN. Generally speaking. Let us keep to facts.

Mr. ROMMEL. It is not general that there is one silo on each farm. The number of farms in the country that have silos are in the minority. There ought to be one on every farm in every section of the country.

Mr. MCLAUGHLIN. It takes about 8 or 10 acres to fill a silo, and most have 60 or 70 acres. What will they do with the other acres?

Mr. ROMMEL. Put them into corn fodder as they do in the East.

Mr. MCLAUGHLIN. But what are you going to do with it if you cut it up and do not use it and the corn is soft and the cattle will not eat it?

Mr. ROMMEL. We do not have soft corn every year.

Mr. MCLAUGHLIN. I am speaking of what we have had last year.

Mr. ROMMEL. We have passed that year. I hope we will not have another soft-corn year like last year, not until the war is over, anyhow.

Mr. YOUNG of Texas. Those cattle that were shipped to Louisiana, Georgia, Florida, and elsewhere; I would like to know how those cattle did after they were shipped into that territory.

Mr. ROMMEL. They have done very well.

Mr. YOUNG of Texas. Was the death rate very high?

Mr. ROMMEL. No, sir; the death rate was not as great as it was feared it would be in most cases.

Mr. YOUNG of Texas. There is quite a different climatic condition.

Mr. ROMMEL. There was an occasional man who had an idea that he could take those cattle and turn them out. Now and then a man thought he could turn them out in the East as they do in the West, and there were some losses on that account, but the losses were not serious.

The CHAIRMAN. Have you any further statement to make on that item?

Mr. ROMMEL. I have nothing further on that. I am interested in the next four items. The next item, live-stock production in the Great Plains region, item 5, page 5, is estimated for 1919 at $100,000. That item grew out of a tour of inspection made by four officers of the department headed by Assistant Secretary Pearson, throughout the drough-stricken area of Texas, in November. That committee came into contact with men of all classes, from the prosperous, influential banker, down to the debt-ridden tenant farmer.

As a result of that investigation, the Bureau of Animal Industry suggested the desirability of putting on a strong extension campaign throughout the entire Great Plains region, from the Mexican line to the Canadian boundary, to induce the farmers in that section to put their farming on a live-stock basis. All throughout the Great Plains they have periods of drought alternated with periods of exceedingly great abundance. There will be a year or two where their crops are enormous, especially their feed crops. They have no means of storing these feed crops except by stacking or by putting the feed into silos. All through this region, certainly through the southern two-thirds of it, the pit silo is perfectly practical. It can be built at no expense in the way of money outlay except for the cement that is necessary for the collar into the silo, and to plaster the walls of the silo and the bottom, and for such little equipment in the way of hoisting machinery, etc., as is necessary. The farmer can make these silos by his own labor in idle moments. Take Texas, for example, as a good illustration. The farmers of the principal part of the drought-stricken region depend on cotton largely for their money crop. They make a good crop of cotton ordinarily. They carry a little live stock, just a few head, some dairy cows, and some work stock. When they get caught the way they were caught last year in the drought they have no means of carrying that live stock over except by buying feed. Very few of them have as much as a carload of cattle. Therefore they are dependent on the itinerant buyer, and all through Texas and all through Montana cattle were bought last year on account of the drought by these itinerant buyers at from a half to a third of what they were bringing at the same time in the central market. Around San Angelo, Tex., they were buying cattle at $15 a head when they were selling for from $30 to $45 at Fort Worth, and the farmers could have gotten that price for them if they had had the feed supplies.

Mr. HAUGEN. What is the expense of shipping them to the market?

Mr. ROMMEL. Not over $5 or $6 a head. If they had had a feed supply they could have saved those cattle and they would have been independent of the situation, and that would have brought the live stock through. It is our opinion that there will never be stable farming in the Great Plains region as a whole until it is put on a live-stock basis.

Mr. MCKINLEY. How long will that food keep in the silos?

Mr. ROMMEL. Indefinitely if properly packed, just as food or vegetables in a glass jar will keep.

Mr. MCKINLEY. They have to keep it sealed?

Mr. ROMMEL. It seals down automatically. The top may spoil, but that top foot or so acts as a seal.

Mr. WASON. Will it keep if you keep breaking in?

Mr. ROMMEL. If you keep feeding it regularly the silage will not spoil in the silo.

Mr. CANDLER. This is for the little fellow?

Mr. ROMMEL. Yes, sir; to help the little fellow.

Mr. MCKINLEY. It is practically a cistern?

Mr. ROMMEL. Yes, sir; it can only be put in where the soil is such that it will not cave and where the water table is far enough below the surface. It has been argued that pit silos are dangerous, that poisonous gases are formed, and that persons entering them will be overcome and die.

Mr. LEE. It is hardly deep enough for that.

Mr. ROMMEL. It is quite deep enough. Some of them are 30 feet deep. But some farmers keep a rabbit in the silo and if they find that the rabbit will live they go in.

Mr. YOUNG of Texas. And they use pigs.

Mr. ROMMEL. Yes; some use pigs.

Mr. YOUNG of North Dakota. This work of your bureau is advisory?

Mr. ROMMEL. Advisory, in connection with the agricultural colleges.

Mr. HAUGEN. How much do you make out of velvet beans; how much per acre?

Mr. ROMMEL. I do not know how much; somewhere in the neighborhood of 15 to 30 bushels. We do not know much about the velvet bean yet. They usually plant it in the corn. Sometimes they will plant every other row and just drop the beans in with the corn. If they do that the vines grow so thick that they run over everything. A better plan is to plant in every third row or every fourth row of the corn.

Mr. HAUGEN. Will it do well in the North?

Mr. ROMMEL. Not north of South Carolina.

Mr. HAUGEN. In value how does it compare with the corn?

Mr. ROMMEL. For the South it has more value than the corn because it is much cheaper.

Mr. HAUGEN. Bushel for bushel?

Mr. ROMMEL. The best way to feed it is to turn the cattle in and let them graze it, but they have been putting velvet bean meal on the market, which is the pod and seed crushed together, and that is selling from $30 to $35 a ton where the cotton seed is selling around $60.

Mr. HAUGEN. Does it require very much cultivation?

Mr. ROMMEL. Not much.

Mr. HAUGEN. Do you cultivate it the same as corn?

Mr. ROMMEL. The same as corn.

Mr. MCLAUGHLIN. When it is used as silage you put in the pods and grain and all?

Mr. ROMMEL. Yes, sir.

Mr. MCLAUGHLIN. How does that do?

Mr. ROMMEL. It makes a very good silage.

Mr. WILSON. What is the comparative value of the velvet bean and the cowpea?

Mr. ROMMEL. The velvet bean would make more forage. There is one difference: The cowpea is good as a human food and the velvet bean is not. That is one advantage of the velvet bean, that we can urge the extension of the velvet bean without any fear back in our heads that we are advising feeding a product which can be used for human food.

Mr. WILSON. You do not mean that it is poisonous?

Mr. ROMMEL. No; it is not poisonous; it simply is not palatable.

Mr. MCLAUGHLIN. I think the nearest you can come to the velvet bean in the North is the soy bean.

Mr. ROMMEL. The next item is item 6, on page 6, production of pork. In 1918 we had an allotment of $117,060, and the estimate for 1919 is $150,000, an increase of $32,940. That allotment was devoted mainly to the pork-production campaign. I have here, Mr. Chairman, if the committee wishes, a statement of the war program for 1918 pork production which the department put out which I can file for the record if you wish.

Mr. LEE (acting chairman). It can go in.

(The statement referred to follows:)

WAR PROGRAM OF THE UNITED STATES DEPARTMENT OF AGRICULTURE FOR THE INCREASE IN PORK PRODUCTION IN 1918.

Slaughter of hogs.

Federal inspection, fiscal year ending June 30:

1916	40,482,000
1917	40,210,000
Decrease	272,000

It is quite accurately estimated that the slaughter of hogs under Federal inspection represents 60 per cent of the total slaughter of the United States. On this basis we therefore find the following estimate for the total slaughter of the country for the two fiscal years in question.

Total slaughter, estimated:

1916	67,470,000
1917	67,020,000
Decrease	450,000

It should be pointed out that the actual decrease in the amount of pork produced is greater than the figures above would indicate. The hogs slaughtered during the fiscal year of 1917 were much lighter in weight than those marketed in the previous year. Further indication of the decrease in swine production is found in the report of the Bureau of Crop Estimates of the United States Department of Agriculture for hogs on farms September 1.

Hogs on farms, Sept. 1:

1916	65,645,000
1917	60,218,000
Decrease	5,427,000

So much for the situation in regard to hog stocks. The increase in cereal production in the United States in 1917 is very much above the year 1916. The estimate of the corn crop on November 1 by the United States Department of Agriculture was 3,191,083,000 bushels; the December estimate of 1916 crop by the same authority was 2,583,241,000 bushels. The five-year average for the years 1911–1915 was 2,754,165,000 bushels. The increase of the 1917 year crop over that of 1916 based on the November estimate is 607,842,000 bushels. The increase in 1917 over the five-year average is 438,832,000 bushels.

The Department of Agriculture estimates an excess of 20 per cent of the corn crop to be soft. This soft corn must be fed to live stock. However, in view of the heavy southern crop (which is in unusually good condition) and the fact that most of the corn crop is always fed to live stock, it is a safe statement to say that there will still be an abundance of corn of a marketable quality to meet the usual market demands and insure reasonable prices for corn for feeders who must purchase grain. The following brief survey of the grain increase in the country should be considered:

Cereals.

Increase 1917 over 1916:	Bushels.
Corn	500,000,000–607,000,000
Oats	328,000,000
Barley	20,000,000
Rye	8,000,000
	856,000,000–963,000,000
Wheat shortage	300,000,000
Net	556,000,000–663,000,000

The very extensive campaign now in progress to replace as much wheat as possible with corn should be encouraged in every possible way. However, the corn production of the country is above 30 bushels per capita. The normal wheat consumption is about 5.5 bushels per capita. It is apparent that if it were possible to replace the entire wheat consumption in the United States with corn or other grains, there would still remain a very large grain surplus. If we even assume the wheat shortage to be 300,000,000 bushels and subtract the entire amount from the minimum grain increase indicated above, we should still have a net grain increase of 556,000,000 bushels as a minimum with the possibility that this amount will be over 600,000,000.

Stocks of old corn on farms November 1 are estimated at 34,745,000 bushels (1.3 per cent of the 1916 crop), compared with 87,908,000 bushels on hand a year ago and an average for five years of 100,523,000 bushels. Charge off this shortage against the 1917 crop and we still have a huge surplus, thus:

	Bushels.
1917 grain surplus, minimum	856,000,000
Less assumed wheat shortage	300,000,000
	556,000,000
Less difference in stocks of corn on farms	53,000,000
	503,000,000
Or, less difference in hold-over corn, 5-year average basis	490,000,000

It should be noted that the above calculations are based on an increase of 500,000,000 bushels in the 1917 corn crop over 1916. The Government estimate for November shows an increase of over 607,000,000 bushels. This estimate is very close to the actual yield. As a matter of fact, therefore, the December estimates will probably show an increase in the cereals available for food of more than 950,000,000 bushels over 1916. The duty of American farmers to themselves and to the Nation is clear. Live-stock production, especially hog raising, must be increased.

LIVE STOCK MAKES THE CORN CROP MARKETABLE.

Of a normal crop, 75 to 80 per cent is fed.

When the crop is greatly increased above normal, a still greater proportion must be fed in order to make the remainder marketable at a profit. If there

should be a serious shortage of hogs in the country in 1918, there will be more corn on hand than the market can absorb. The increase in the 1917 corn crop over that of 1916 is more than 15 per cent. The demands on the country for domestic consumption and for export require an increase of 15 per cent in pork production in 1918. The corn-crop increase and the pork-production requirements therefore coincide in theory, and must coincide in practice in order to avoid serious declines in the price of corn. The increase in cattle feeding in the corn belt can be depended upon largely to take care of the soft-corn situation in the States which are called upon for an increase in pork production.

The following statement shows the requirements of each State which is asked to increase swine production next year: Increase in pork production in 1918, entire United States, 15 per cent over 1917. Allotments by States as follows:

State.	Increase for 1918.	Interpretation.
	Per cent.	
Missouri	50	Where a farmer bred 20 sows in the fall of 1916, he should breed 30 in the fall of 1917.
Alabama	30	Where a farmer bred 20 sows in the fall of 1916, he should breed 26 in the fall of 1917.
Kansas	25	Where a farmer bred 20 sows in the fall of 1916, he should breed 25 in the fall of 1917.
Iowa	25	Do.
Illinois	20	Where a farmer bred 20 sows in the fall of 1916, he should breed 24 in the fall of 1917.
Indiana	20	Do.
Nebraska	20	Do.
Arkansas	20	Do.
Mississippi	20	Do.
Ohio	15	Where a farmer bred 20 sows in the fall of 1916, he should breed 23 in the fall of 1917.
Kentucky	15	Do.
Tennessee	15	Do.
South Carolina	15	Do.
South Dakota	10	Where a farmer bred 20 sows in the fall of 1916, he should breed 22 in the fall of 1917.
Maryland	10	Do.
North Carolina	10	Do.
West Virginia	5	Where a farmer bred 20 sows in the fall of 1916, he should breed 21 in the fall of 1917.
Georgia	5	Do.

Farmers who do not breed as many as 20 sows can readily calculate the amount of increase which they should make in order to "do their bit." For example, if a farmer bred 4 sows in the fall of 1916 and breeds 5 in the fall of 1917, he contributes at the rate of 25 per cent increase. If he bred 10 sows in 1916 and breeds 11 in 1917, he shares in 10 per cent increase. If he bred only 2 sows in 1916 and breeds 3 in 1917, he contributes exactly his quota if he lives in Missouri.

The supply of breeding sows is undoubtedly short this fall. The breeding ranks will have to be filled to a considerable extent with gilts from the food lots. These gilts will not produce quite so large litters as mature sows may be expected to produce. Therefore, farmers using gilts should breed slightly above the prescribed quotas in order to insure the requisite increase in spring pigs.

Attention should be given to the fact that this program has been carefully worked out according to the known requirements for 1918. If it is met in every detail, these requirements will be fulfilled. If the farmer breeders of the various States do not reach the quotas set forth for them, a more acute shortage of pork products will result than now prevails, extremely high prices for hams, bacon, and lard will prevail and only a few "wise ones" will benefit, the consumer suffering from extremely high prices and a shortage of necessary animal fats. On the other hand, if the program is carried out, a market is provided for about one-third of the 1917 corn crop, the demands on the country for pork products can be met without strain, prices to the producer should be remunerative and those paid by the consumer should be reasonable. The country banker will indorse a systematic businesslike plan such as is herein outlined.

There are given below November estimates of the 1917 corn crop of certain States, with which are compared the yields for these States in 1916.

Southern corn crop.

	Bushels.
1917	937, 121, 000
1916	819, 022, 000
Increase	118, 099, 000

This increase is approximately 20 per cent of the total increase of the Nation.

	1917	1916	Increase, 1917.	Decrease, 1917.
Maryland	30, 576, 000	27, 300, 000	3, 276, 000	
Virginia	71, 369, 000	60, 990, 000	10, 379, 000	
West Virginia	25, 020, 000	22, 112, 000	2, 908, 000	
North Carolina	66, 120, 000	53, 650, 000	12, 470, 000	
South Carolina	43, 947, 000	32, 008, 000	11, 939, 000	
Georgia	71, 680, 000	62, 000, 000	9, 680, 000	
Florida	14, 370, 000	12, 600, 000	1, 770, 000	
Kentucky	124, 372, 000	95, 200, 000	29, 172, 000	
Tennessee	109, 200, 000	84, 500, 000	24, 700, 000	
Alabama	74, 704, 000	46, 688, 000	28, 016, 000	
Mississippi	81, 600, 000	47, 600, 000	34, 000, 000	
Louisiana	42, 246, 000	44, 814, 000		2, 568, 000
Texas	78, 936, 000	131, 100, 000		52, 164, 000
Oklahoma	36, 261, 000	53, 325, 000		17, 064, 000
Arkansas	66, 720, 000	45, 135, 000	21, 585, 000	
Total	937, 121, 000	819, 022, 000	169, 895, 000	71, 796, 000

Net increase, 119,099,000 bushels.

Corn crop in certain Northern States.

	1917	1916	Increase, 1917.
Ohio	156, 408, 000	115, 762, 000	40, 646, 000
Indiana	203, 436, 000	174, 658, 000	28, 778, 000
Illinois	426, 816, 000	306, 800, 000	120, 016, 000
Iowa	412, 772, 000	366, 825, 000	45, 947, 000
Missouri	263, 200, 000	132, 112, 000	131, 088, 000
South Dakota	92, 512, 000	84, 075, 000	8, 437, 000
Nebraska	259, 740, 000	192, 400, 000	67, 340, 000
Kansas	128, 436, 000	69, 500, 000	58, 936, 000

Mr. ROMMEL. The campaign was planned by the department, after consultation with the Food Administration, to increase pork production in 1918 over 1917 at least 15 per cent. This increase was then worked out by the Bureau of Crop Estimates, predicated on the 1917 corn crop and allotted to the different States. This allotment extended all the way from a 5 per cent increase in such States as Georgia and West Virginia up to a 50 per cent increase in Missouri. We put the campaign on by a series of meetings, at the headquarters of the agricultural colleges of the corn-belt States. We followed this up with campaigns in these States, devoted to bringing about an increase in the breeding of sows last fall. As a result the Bureau of Crop Estimates shows 9½ per cent more breeding sows on April 1, 1918, than there were on April 1, 1917. There was the best farrowing weather in March this year than we have had in a great many years. Therefore we believe the country will reach the 15 per cent increase in pork production. In the Southern States we have laid the greatest emphasis on the increase in pig clubs. We have not the figures yet and will not have them for some few weeks on the result of the pig club campaign, but we hope to secure an increase of from about 40,000

to 200,000 members. We are also driving on pig clubs in the North. In the far west in the irrigation States we asked them to increase their pork production as fast as they could, because it will have no serious affect on the aggregate production of the country; it would not affect it much if they doubled their production. If they do not have enough to feed the hogs they can be moved into the corn belt as feeders. Hogs were shipped from Arizona last summer to Kansas.

Mr. ANDERSON. How much will the present increase depress the price of pork?

Mr. ROMMEL. I should not say that it will depress the price at all, because there is a demand which will take it up.

Mr. WILSON. Would it not be a good idea to depress the price of pork?

Mr. ROMMEL. The purpose of the emergency pork production is to work out the country's requirements so that we will avoid the danger of overproduction or the danger of underproduction; in other words, to prepare a program whereby the country, working as a unit, can produce all the pork that it needs to meet its war requirements.

Mr. CANDLER. Your estimate is intended to keep up with the demand?

Mr. ROMMEL. Yes, sir; and to anticipate the demand. We are already drawing our plans for 1919, looking ahead to the next breeding season.

Mr. HAUGEN. Did you make any investigations in Oklahoma as to the number of brood sows?

Mr. ROMMEL. In Oklahoma there was a decrease of 85 per cent as compared with last year. Oklahoma and Texas showed a marked falling off.

Mr. WILSON. Why?

Mr. ROMMEL. On account of the drought. That was in the western part of those States. Eastern Texas and eastern Oklahoma are in good shape.

Mr. HAUGEN. At a hearing before this committee somebody stated that there was less than one brood sow to a farm.

Mr. MCLAUGHLIN. Did your investigation disclose whether much wheat has been fed to hogs?

Mr. ROMMEL. Some wheat has been fed to hogs, and we have discouraged it. We have told the farmers in the far western States that if it is a question between human beings and hogs as to who gets the wheat there is only one answer.

Mr. MCLAUGHLIN. What are those far Western States you speak of?

Mr. ROMMEL. The wheat-growing States of the West, Montana, Colorado, Wyoming, Idaho, and so on. We have urged them where they could to grow barley instead of wheat for feeding purposes.

Mr. HAUGEN. They have fed the hogs with wheat?

Mr. ROMMEL. It is a very common feed in that section for all sorts of live stock.

Mr. HAUGEN. There is nothing uncommon about it?

Mr. ROMMEL. Nothing at all in these wheat-growing sections.

Mr. YOUNG of North Dakota. It is not done in North Dakota.

Mr. ROMMEL. It is done in Colorado and Montana and other parts of the far West.

Mr. LEE. Is there much wheat fed to hogs in Oklahoma?

Mr. ROMMEL. I have heard some statements as to wheat feeding in Oklahoma, but I do not believe that as a rule they use very much of it for that purpose.

Mr. LEE. Is it not true that in parts of Texas, up in the northwest section of the State, they make some pretty good wheat and do not make any corn, and the people have to feed it to keep the live stock alive?

Mr. ROMMEL. That does not affect the whole situation seriously.

Mr. LEE. What do you say as to the extent to which wheat was fed to hogs in Kansas, Nebraska, Iowa, and Missouri?

Mr. ROMMEL. I do not think it amounts to anything serious at all.

Mr. WILSON. Under the regulations, that was the cheapest food that could be gotten. That is the trouble with it.

Mr. ROMMEL. It depends on whether the corn was soft, and if your corn was soft enough it had no price.

Mr. HAUGEN. They are shipping soft corn?

Mr. ROMMEL. They are shipping it as fast as they can get cars to ship it in.

Mr. HAUGEN. It has been stated that corn was rotting in the fields, that it was not being shipped, and that is the general report.

Mr. ROMMEL. I do not think it is general that corn is rotting in the fields.

Mr. HAUGEN. According to reports it is in some sections.

Mr. WILSON. It is in my section.

Mr. LEE. Have you any further statement to make on that?

Mr. ROMMEL. No, sir. The next item is No. 7, on page 7, production of poultry. The allotment last year was $129,600, and the estimate for 1919 is $168,000, an increase of $38,400. The poultry campaign is outlined in a short statement I have here, and if you will permit me I will file it for the record.

(The statement referred to follows:)

OUTLINE OF GOVERNMENT POULTRY CAMPAIGN.

The campaign that has been inaugurated by the United States Department of Agriculture in cooperation with the State colleges of agriculture to stimulate and increase poultry production along more efficient lines is divided into the following phases:

Careful selection of breeding stock to reproduce a larger percentage of good types of profitable producers.

Early hatching, so as to produce fall and winter layers.

To confine mother hens to brood coops for at least two weeks after the chicks are hatched.

To provide free range for both growing stock and layers in so far as possible to stimulate growth and production and conserve food consumption.

To preserve eggs for winter use.

The production of infertile eggs as soon as the breeding season is over.

Disposing of surplus cockerels as broilers to conserve grain.

To discourage the marketing of all profitable hens of the general-purpose class until the end of their second year, and of the Mediterranean, or egg class, until the end of their third laying year.

To encourage the careful selection of all hens in order to eliminate the unprofitable producers.

To discourage the marketing of all profitable pullets as broilers and of all well-matured pullets for meat.

To encourage the caponizing of cockerels only when free range can be provided and a special nearby market afforded.

To encourage back-yard poultry keeping, especially among city and suburban dwellers, thereby utilizing table scraps for the production of fowls and eggs for home consumption.

To encourage, when conditions permit, the feeding of a wheatless ration, in order to conserve this grain for human consumption.

To encourage turkey, duck, and geese raising when circumstances are favorable.

For published information and individual advice on poultry raising, write to your county agent, State college of agriculture, or the United States Department of Agriculture, Bureau of Animal Industry, Washington, D. C.

Mr. McLAUGHLIN. I do not see anything about anything being left over in this allotment of 1918.

Mr. ROMMEL. I can give you those figures.

Mr. WILSON. For what purpose are you expending this increase in these various items—for extra help?

Mr. ROMMEL. Extra help; yes, sir. That shows in the detailed expenditures. It is for extra assistants, so that we can cover sections of the country that were not covered this year. Take, for example, the beef-cattle proposition. That was handled by a very short-handed and overworked force. We want to be able to handle that with a suitable number of employees.

Mr. McLAUGHLIN. Would it not be well for some witness to put into the record the amount of money that will be left from the allotments of 1918?

Dr. MOHLER. I have a statement here that I can insert in the record as to that.

Mr. CANDLER. Would it not be a good idea to have those figures printed at the end of the statement for each bureau, so that we would have a concrete statement with reference to what is on hand and as to the appropriations?

Mr. HARRISON. All the money that is not expended will go back into the Treasury. These appropriations expire on the 30th of June. I would also like to remind the committee that we will be working under the new appropriations for a complete year, whereas the emergency funds for the current fiscal year were not available until the 10th of August, so that we have been operating for only 10½ months. In considering these increases that fact should be borne in mind.

Mr. McLAUGHLIN. The statement, nevertheless, will be of some value, although not as much as I thought when I asked the question.

Mr. HARRISON. We have not suggested that the unexpended balances be retained. The Secretary has the appropriations under his control and has allotted the funds to the bureaus as necessity has shown itself.

Mr. WASON. Is there not any way in which we can preserve the appropriations that we have already made for the department by making available for next year any balances of the emergency funds which remain unexpended on June 30?

Mr. HARRISON. It would be easy enough to do it by inserting a sentence in the bill.

Mr. McLAUGHLIN. I will suggest that it will not be necessary, inasmuch as you have requested, and very likely the bill will carry the full amounts needed for next year.

Mr. LEE. Have you stated just how this money will be expended, Mr. Rommel?

Mr. ROMMEL. Mr. Chairman, the item of poultry and sheep production, I can cover in a few moments.

Mr. YOUNG of North Dakota. A great many questions have come to me from the Great Northern Railroad Co. recently. Have you been doing some work with the railroad companies to get them started on this work?

Mr. ROMMEL. No, sir.

Mr. YOUNG of North Dakota. The Great Northern has done a lot of it.

Mr. ROMMEL. Most of those people have men out, and they urge their patrons to write to the Government for farmers' bulletins which are available. We have quite an extensive series of farmers' bulletins on hogs, on poultry, and on other classes of live stock.

Mr. YOUNG of North Dakota. My conclusion was that they must have some men out stirring them up.

Mr. ROMMEL. The purpose of the poultry campaign is to increase production as far as it is humanly possible. Our poultry production has been decreasing instead of increasing. The cost of feed in the east has caused many farmers to discontinue poultry raising. It has driven poultry producers out of business, and we are hoping to increase the poultry supply by concentrating largely on the centers of heavy production, by urging suburban and city growers to raise poultry in their back yards, extending the industry as much as we can into southern territory, and by every means possible to increase the amount of poultry on the market. The statement which I inserted as to the poultry campaign will apply to next year as well as to this year.

Mr. MCLAUGHLIN. Are you responsible for the order of the Food Administration forbidding the killing of old hens?

Mr. ROMMEL. No, sir; the Bureau of Animal Industry knew nothing about it until it appeared in the papers.

Mr. WILSON. Have you any idea whether or not the automobile has caused a decrease in the production of poultry?

Mr. ROMMEL. There are some poultry buyers that think it has, and our poultry men are not a unit on that. We have discussed the subject considerably. Some poultry buyers claim they do not get as many eggs and poultry in their farming sections as they used to. The farm wife used to be the keeper of the poultry flock and she depended on eggs, poultry, and butter to clothe the family and buy the groceries. Now that her husband has an automobile, some people think the farmer's wife puts in more time visiting her neighbors, and you can not much blame her.

One word in regard to the men that we are after to get to handle our poultry campaign. I wish to read into the record a brief statement of the experience that these men have had. We have four men whose experience has been 30 years or more in the production of poultry, 17 who have had from 20 to 29 years of experience, 9 who have had from 10 to 19 years, 18 who have had from 5 to 9 years' experience, and 3 who have had from 2 to 4 years' experience. These men are all being appointed after a civil-service examination. An experience of at least two years is required before they can be considered for appointment. We are getting a number of unusually capable poultry men in this connection.

Mr. WASON. Before you appoint these men you investigate to see if they were successful poultry raisers?

Mr. ROMMEL. Yes, sir.

Mr. ANDERSON. It seems to me that if the grain situation and the price situation continue as they are you have a hard job on your hands in this increased production work. It is utterly impossible to get people to raise poultry at the present price of feed. The same thing is true about hogs. Unless the Government is going to adopt some policy touching prices that will make it an object for people to raise them, all this demonstrational work and work of that sort you can do will not create very much enthusiasm for increased production.

Mr. YOUNG of North Dakota. That would not apply to by-products.

Mr. ANDERSON. I do not think there is very much commercial poultry raised that way.

Mr. ROMMEL. The great bulk of our poultry production comes from the Middle West, and is raised on the farms—the farm flocks that are being maintained practically without any defiite charge against their upkeep. They range over the farm and pick up waste grain. I do not believe the commercial poultry farm, where all the feed is bought, can be made a business success; but it is perfectly possible for every farm in this country to increase the size of its flock of poultry without in any way noticing the slightest inroad on the farm income, but, rather, there will be an increase in profits. We are urging people in the suburbs to keep a flock of poultry in the back yard and feed them on the table waste they have or on lawn cuttings, etc., with a minimum of purchased feed. For instance, to buy pullets when they begin to lay, keep them through the laying season, and eat them when they are through laying. That is perfectly possible. But this thing of a poultry man, or any other kind of a live-stock man, buying all his animals and buying all his feed is nota good economical problem. It is false economics, and the sooner we find that out in this country the better.

Mr. HAUGEN. The conclusion is that there is no profit in poultry at this time?

Mr. ROMMEL. If you buy all your feed at the price feed is at the present time, no. Here is the proposition: Why should a poultry man of New England or New York ask somebody else to raise the feed for him that he has to have for his poultry? At the present price of corn he can not do it.

Mr. HAUGEN. But the poultry in the back yard has to be fed the same way.

Mr. ROMMEL. But the record of back-yard poultry feeding shows it is successful.

Mr. HAUGEN. You and I have had enough experience to know that if we have poultry in the back yard we also have to purchase feed.

Mr. ROMMEL. That depends entirely on how you do it. We have cases right here in Washington of people that are making it profitable to do that on a small scale.

Mr. HAUGEN. On a very small scale.

Mr. ROMMEL. That is true; but if you take several hundred thousand or several million people doing it on a small scale, you have an enormous aggregate, and we have got to consider the poultry business in that way. It is an enormous aggregate of a lot of very

small businesses, not any one of which is sufficient to support one family.

Mr. HAUGEN. Say, with a family with half a dozen chickens, how much feed would they have to buy?

Mr. ROMMEL. I do not think that is a fair question. I might answer that by giving my own experience. I got the back-yard poultry fever myself last year, and I got my wife's consent to take my back yard of 900 square feet to use as a poultry yard. I got to figuring it out and found I would have an expenditure of $15 or $20 at the outset and the least I could see coming in from that was in the neighborhood of four or five dollar's worth of poultry. But here is Dr. Mohler, who keeps a flock of chickens and gets a lot of eggs from them, and when they are through the hens make the final sacrifice and go on the table. Dr. Mohler has done that year after year and has done it successfully.

Mr. HAUGEN. I think it should be encouraged, but I do not think any representation should be made that money can be made out of poultry.

Mr. ROMMEL. I am not advocating that at all. I have made the statement right here in the last five minutes that the thing we must make a drive on is an increase in the keeping of back-yard poultry, where it does not become a financial object.

Mr. HAUGEN. When we have done anything along that line the department deems it its duty to do something to depress the price. They get along fairly well in the hog business, and here comes along some department and decreases the price of hogs. Take the poultry proposition. What was done? They forbid the selling of chickens so as to depress the price of eggs. We are up against such propositions all the time. That is not to be criticized at this time, but the principle is wrong. If an industry is entitled to the benefit of the law of supply and demand the farmer ought to be. At the present time we have to put up with these things, and yet when the farmers are doing the best they can, when a bushel of wheat is fed to stock someone comes in and questions their loyalty. I think it is time we got down to business and dealt with facts rather than dreams.

The CHAIRMAN. We will now take up the next item—production of sheep.

Mr. ROMMEL. There is an allotment for 1918 of $12,000, and the estimate for 1919 is $60,000, an increase of $48,000. We are doing everything to encourage at this time the extension of the farm-sheep industry. In the last year there has been an enormous increase in the number of ewes that have gone back to the farm. The figures for the slaughter of sheep for 1917 show very little of the usual late summer and fall increase in slaughter of sheep, because every ewe that was fit to be bred went back to the farms. When the run of lambs from the West that always comes in the winter began to make itself felt, commission houses in the central Western States detailed men to sort the ewe lambs from the wether lambs to be sold to farmers.

The farmers are going into the sheep business strong, and they need the best advice they can get as there is great danger that they will get into trouble. The farm-sheep industry in this country is one that is beset with a good many dangers. The farmers have to be

told how to avoid stomach worms, etc., and how to raise their sheep, and finish the lambs off without putting too much grain into them. That is what we have in mind in asking for this increase, to be enabled to employ sheep experts—men that are qualified to advise the farmers, to work with the agricultural colleges and their extension forces, so that the farmers will get the best advice.

The CHAIRMAN. What section of the country do you propose to cover by this work particularly?

Mr. ROMMEL. The section east of the one hundredth meridian. This drive will be largely in the corn-belt States, in New England, and to a considerable extent through the Piedmont and Appalachian regions.

The CHAIRMAN. How does the present production of sheep compare with the production five years ago?

Mr. ROMMEL. We have about as many sheep as we had five years ago. We have a great many more than we had two or three years ago. We have not gotten back to where we were 10 or 15 years ago.

The CHAIRMAN. That has been due to the failure of the eastern part of the country to keep up their production?

Mr. ROMMEL. Yes. Until the last two years the farmers have been slowly going out of sheep production.

Mr. MCLAUGHLIN. Do you not find that in a part of the country that is pretty well settled it is not profitable to raise sheep, because there is so much destruction from dogs?

Mr. ROMMEL. That is one thing that has held it back.

Mr. MCLAUGHLIN. Is not that position quite wise?

Mr. ROMMEL. The actual destruction is not serious, but the fear of the farmer that a dog will get into his flock will keep him out of sheep production. We have got to control the dogs before we can build up the farm sheep industry.

Mr. CANDLER. There has been some sheep production in Mississippi, and they have reported that the conditions there were very favorable. Have you looked into that situation?

Mr. ROMMEL. Yes, sir. This $12,000 is being largely devoted to getting men who are suitable for extension work of that character. We are putting a man this week in Florida, and next week a man will be put in Louisiana. We hope to put a man in Missisippi before the close of the season.

Mr. HAUGEN. Is it necessary to send out an expert to advise the farmers to buy worm powder?

Mr. ROMMEL. No.

Mr. HAUGEN. I understood you to say you were going to send a number of them to advise the men how to take care of their sheep.

Mr. ROMMEL. We have to give them advice as to how to keep their sheep from getting stomach worms. The way to avoid the stomach worm is by a proper system of management, not so much by dosing. The best results are obtained from a proper system of management.

Mr. HAUGEN. How is that done?

Mr. ROMMEL. By the rotation of pastures, not permitting the lambs to stay more than two or three weeks on one piece of ground.

Mr. HAUGEN. Would not a bulletin on that answer?

Mr. ROMMEL. We have bulletins.

Mr. HAUGEN. Is it necessary to send people into the country to give that information?

Mr. ROMMEL. We have a demand for them; we are judging by the demand. We have a demand that we have not been able to meet at all.

Mr. MCLAUGHLIN. A few days ago I received a letter from a young man in my home town, a very intelligent young fellow, who was in Buffalo and who evidently had a chance to see stock coming for slaughter, and he was appalled to see the number of ewes that were in the cars, and so many of them carrying lambs brought there for slaughter in that condition.

Mr. ROMMEL. But were they slaughtered?

Mr. MCLAUGHLIN. They were going straight for the slaughter-houses as fast as they could go.

Mr. ROMMEL. I think it ought to be very carefully ascertained whether or not those sheep were slaughtered. Somebody was asleep if they were, because they were worth more for breeding purposes than for slaughter.

Mr. MCLAUGHLIN. Is there any inspection or regulation looking to the prohibition of the killing of ewes in that condition?

Mr. ROMMEL. No, sir.

Mr. MCLAUGHLIN. Then what would lead you to believe that the lambs the gentleman saw would not go to slaughter?

Mr. ROMMEL. Because they were worth more for breeding purposes.

Mr. MCLAUGHLIN. That might be true as to starting on the farms or ranges, but after they had reached Buffalo is there any reason to believe that they would not be slaughtered?

Mr. ROMMEL. Yes, sir; there are buyers on the Buffalo market watching for just such sheep as that, because they would be worth a great deal more for breeding purposes than for slaughter. We have information of the sale of ewes on eastern farms for $35 each, with lambs at their sides.

Mr. MCLAUGHLIN. I mean carrying lambs.

Mr. ROMMEL. They would not be so high; but I very seriously question whether those ewes were slaughtered, because at Buffalo and every other market for the last eight months ewes that were at all fit to breed have been bought up to send back to the country. That is shown in a dozen and one different ways, and also in the official reports on the decrease in the slaughtering of sheep.

Mr. HAUGEN. Have you any information as to the number of ewes that were slaughtered?

Mr. ROMMEL. No.

The CHAIRMAN. Is there anything further on that?

Mr. ROMMEL. No, sir.

(Thereupon, at 12.15 o'clock p. m., the committee took a recess until 2.30 o'clock p. m.)

AFTER RECESS.

The committee reconvened at 2.30 p. m. pursuant to the taking of recess.

STATEMENT OF MR. B. H. RAWL, CHIEF OF THE DAIRY DIVISION, BUREAU OF ANIMAL INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. Your first item, Mr. Rawl, is No. 9, on page 8. "Making cottage cheese on the farm." The allotment for 1918 was

$52,950, and the estimate in this bill is $80,000, which is an increase of $27,050.

Mr. RAWL. Mr. Chairman, the high price of feed and various other difficulties are confronting the dairy industry. We are doing all we can with our regular funds to assist in dealing with these problems, and according to the Bureau of Crop Estimates the dairy herds have been maintained and even slightly increased thus far. The funds available for emergency work have been applied largely to the more complete utilization of dairy products.

Cottage cheese is a very cheap and wholesome food; its food value is approximately equal to that of meat. In all sections of the country the quantity of meat consumed could be considerably reduced if cottage cheese and other dairy products were used more liberally. Much skim milk which is now fed to live stock could be used to better advantage as human food. The experience of the department during the present fiscal year clearly indicates the desirability of carrying on an active campaign for the purpose of encouraging the making and consuming of cottage cheese. With the emergency funds available this year an agent will be assigned to each State to demonstrate proper methods of making cottage cheese and to give definite information regarding its use.

These agents will carry direct to the home-demonstration forces the results of the investigations of the Dairy Division along this line, and the work will be done through and in close cooperation with the extension authorities. The funds at present available are sufficient only to continue the work to the end of the current fiscal year. The additional funds recommended are needed in order to provide for its continuation for a period of approximately eight months during the fiscal year 1919.

Item 9, on page 8, relates to the utilization of skim milk on the farm and the production of cottage cheese. Most of our production work has gone forward on the line that it had followed before the war.

Incident to the production of the butter of the country, which amounts to about 1,650,000,000 pounds annually, there are practically 29,000,000,000 pounds of skim milk. Approximately half of this is from milk used in making creamery butter, and the remainder is milk used in making farm butter.

On such farms there is frequently a surplus of skim milk. In certain regions, like Pennsylvania, for instance, this milk is not utilized as human food. In such cases it is usually fed to animals. As incident to the creamery industry, there is something like 12,000,000,000 pounds of skim milk which is produced usually in large quantities or from herds which range, say, from 5 to 10 cows. Some are even larger than that.

There is in existence, therefore, a large volume of skim milk, a most excellent food, that has not received a great deal of attention heretofore.

In some of the creameries and milk plants there is quite a large amount of skim milk wasted. Several thousand pounds daily in some cases of either skim milk or buttermilk was allowed to go into the sewer because there was no satisfactory means of handling it. For a long time we have felt that there was need for increasing the

use of this by-product as human food, one of our most wholesome animal products and one of the very cheapest.

The latter part of last summer funds were made available for this work. A few men were put out into the country to introduce among the farmers the methods of making and using cottage cheese.

There is in many counties of the United States a woman worker or home-demonstration agent, also a county agent, and our purpose was to give the necessary aid to these workers, to enable them to encourage the production and consumption of cottage cheese. There was expended about $8,600, and approximately 2,700 new families were induced to begin systematically making and using this as a part of their staple food supply. Our purpose in this was not to make a maximum number of demonstrations, but instead to give to the home-demonstration agents and the county agents the necessary technical aid to enable them to go ahead with this work. These demonstrations were made then as an incident to the training of these workers. After this was done in a small way, during the latter part of last summer—the summer being the better time because of the larger supply of milk—this spring, with more funds made available, we organized a larger force to go ahead with this line of work.

This spring mostly women have been employed for this project. So that at present 38 women and 8 men are engaged in this work, making a force of 46 people. These members include the field supervisors. This work is provided for only until June 30. We do not know exactly what the results of their work are going to be, but so far they have been most favorable. We found we could not get trained men to do the work, and so we concluded to try women who have had experience and were qualified to do this character of work, and they are starting out most enthusiastically. While their work has only been going on for a couple of weeks, the results look excellent, and we believe the work should be continued through in full force at least until the fall or early winter. As to what should be done after that will depend upon the results secured.

The CHAIRMAN. What do you have to do to make cottage cheese?

Mr. RAWL. There are two or three simple methods. One is the old-fashioned way of letting the milk sour and then drain off the whey. That perhaps does not make quite as good cheese as to add a little rennet or a so-called junket tablet that coagulates the milk, and gives you a sweeter and smoother cheese. Junket tablets have the same effect on milk as rennet. You will be interested, no doubt, in the methods developed for the larger utilization of this product.

The CHAIRMAN. Before you go to that, do they have some device by which to press the whey out?

Mr. RAWL. They simply hang it out in a piece of cheesecloth and allow it to drain. A simple press consisting of two boards and a weight is recommended to hasten draining.

Now, in regard to the methods of using it. A great many people have used this product and have a prejudice against it because they think they have had their share of smearcase, as it is frequently called.

The CHAIRMAN. Your folks and mine call it clabber cheese, do they not?

Mr. RAWL. Yes. These women who had experience in the handling of such products, have developed various methods of using cottage cheese, and a large number of very palatable dishes can be made from it. At a conference we had, a little meal was served, which consisted from beginning to end entirely of cottage-cheese dishes. It can be mixed with other things and seasoned, and baked like a roast, or fried like sausage. These are very palatable dishes and have as much nutritive value as such dishes made with meat. It is also very useful in making salads and sandwiches, and in making cheese pies——

Mr. YOUNG of North Dakota. Have you a bulletin giving that information?

Mr. RAWL. Yes; we have. I will send you some of them. Everyone who has tried it knows that it is a nutritious food, but the majority of us do not want to eat a sufficient quantity of it in the ordinary straight way. So we have tried to find ways to make it palatable. So that the development of the methods of using it has opened up a great field for its utilization. At the Sherman Hotel in Chicago last week we had a little demonstration, and dairymen who had been in the dairy business all their lives were astounded that such a palatable food could be made out of this by-product.

That is the nature of this work at the present time. I am speaking of the work being done among the farmers' wives in enlarging the use of this product in the farm home. In this way we seek to encourage the consumption of some of these billions of pounds of skimmed milk that are incident to butter production.

Of course, we know that a large quantity of it is used in various other ways at the present time.

While, of course, we can not say what this larger organization will do—the ladies are most enthusiastic. They are going out to the extension departments of the different States to lead this special work. The extension department is indorsing this and cooperate in every way, and we look for very favorable results. We believe a great deal can be done to increase the uses of this product.

Mr. YOUNG of North Dakota. It is really a substitute for flour, is it not?

Mr. RAWL. It is a substitute for meat, and in that way we can release a quantity of meat. At the present time there is a great big campaign on to have people use potatoes, and people say you can not substitute potatoes for flour. But if you use skim milk with it you can, absolutely.

Mr. LESHER. Do you have agents who teach the farmers' wives?

Mr. RAWL. You are familiar with the extension organization. There is a director who has certain specialists on his staff, and among the specialists they have a woman's home demonstration agent. This home demonstration agent has county women agents working in the various counties with the women's problems, such as baking, canning of fruit, and all sorts of domestic problems. That is a part of the extension system.

We do not start this work unless the State extension authorities wish it and will aid in conducting it. This cottage-cheese worker goes in as a specialist in this extension department for temporary work.

The first thing she does is to get the extension director and the home demonstration agent and the other extension people thoroughly interested in it. The way she does that is to show them some of the dishes that can be made from it.

Then she says, "I want to get your regular county agents to teach this" and "How can we do it?"

The first thing that is suggested is that they be brought together if possible. But often that can not be done. Then she suggests that five or six of them be gotten together, or if that is not feasible, then two or three, and she spends a few days with them, giving them a special course of training. After this it is arranged that these county workers go back home and put on demonstrations, and the cottage-cheese specialist makes it a point to go to as may of these demonstrations as possible and give assistance in order to see that the county workers are successful with the demonstrations. The demonstration is held at some farm home, school, or grange or other hall where a group of the women of the neighborhood may be assembled. There the county worker, with the specialist, will demonstrate the making of cottage cheese and the various ways of using it. When the county worker has this work well in hand, she goes ahead with it without further assistance. This is the work of this project which is now provided for until June 30, and we wish to carry through until the fall. We are trying to get very complete records as to what is being accomplished.

The CHAIRMAN. You have one of the specialists in each State?

Mr. RAWL. In all States where the extension people have wished it. There are a few States in which they have not desired it, but we have this work going on in about 41 or 42 States.

The CHAIRMAN. It has already been organized in that many States?

Mr. RAWL. It has already been organized in that many States, under our present funds, which are available until June 30.

Mr. LESHER. In regard to the comparative value of the feed itself for stock, such as hogs and calves, and using it for food for human beings, how does it compare? There is a certain value in feeding it to the stock?

Mr. RAWL. It is valuable for stock. One hundred pounds of milk will produce about 15 pounds of cottage cheese. When fed to hogs judiciously it will make something like 4.8 pounds of meat. Cottage cheese has more protein in it than meat, but it has not so much fat, so that we consider them approximately in food value. There is then more than three times as much human food in the cottage cheese as in the pork, which may be produced from a similar quantity of milk.

The CHAIRMAN. Your next item, on page 9, is, "Utilization of creamery by-products." Your allotment for 1918 was $21,850, and the estimate for 1919 is $37,500, or an increase of $15,650. Will you please explain that estimate?

Mr. RAWL. Mr. Chairman, it is estimated that, with the proper utilization of the skim milk and buttermilk obtained incident to the manufacture of creamery butter, it will be possible to add annually millions of pounds of good food to supply the Nation in the form of cottage cheese. These by-products—skim milk and buttermilk—could also be used in the manufacture of condensed skim milk, a

wholesome and nutritious food. the demand for which is increasing, as well as in the manufacture of casein, which is now very useful in the arts and for war purposes. We have secured the services of 25 experienced creamery men for a period of four months for the purpose of instructing creamery operators as to the utilization of skim milk and buttermilk by manufacturing cottage cheese and other products.

Here the problem is a commercial one and involves the assembling of the skim milk in the factories and manufacturing it commercially and putting it on the market.

Last summer we tried that out somewhat experimentally. A small force of 10 men was employed during the latter part of the season to go among the creameries where there was or could be had a supply of skim milk.

These 10 men were able to induce 58 factories to undertake this work. These factories operated for an average period of 78 days during the time that this work was in progress.

During these 78 days those 58 factories manufactured over 12,000,000 pounds of skim milk into slightly over 2,000,000 pounds of cottage cheese. None of these factories was making the product before we took it up with them. This record shows what was done during that period of 78 days.

Most of these factories no doubt have continued it.

There is another way of using this skim milk and that is to condense it. Condensed skim milk is being used extensively in various ways. It is somewhat more difficult to conserve skim milk in the form of condensed milk because it requires more equipment and more skill. But we were able to induce several factories to undertake that work and during an average period of 78 days—the period this work was in progress—they utilized 7,000,000 pounds of skim milk in that way. We were able to get 2 factories to utilize the whey, and they saved half a million pounds of whey.

The aggregate result of this factory work for that period, which cost the department $9,442, was a saving of more than 20,000,000 pounds of skim milk for use as human food. This was manufactured into what would be the equivalent of 3,217,000 pounds of cottage cheese, and that would be equivalent to a similar amount of meat.

If this milk had been fed it would not have produced over 1,000,000 pounds of pork at the outside, so that by conserving it and using the milk as human food we are able to save 2,000,000 pounds more of food than if it had been fed to live stock. The total cost of that was $9,442.

Therefore, for each dollar spent we were able to conserve as human food 342 pounds of cottage cheese. That is the result of what was done last fall, the production of 342 pounds of good food for every dollar spent. On that basis, therefore, we asked for more funds, and this spring that work was greatly enlarged by putting on 25 men to go out into the factories. These men are experienced creamery men and they too are working in cooperation with the extension departments.

Since this is a highly specialized work the extension agents are not usually in a position to take hold of it. Through the extension departments and the dairy departments, the factories best adapted

to this work are located. These trained creamery men then go to the factories and show the operators how to make cottage cheese, helping them to make such adjustments as are necessary to make it on a large scale, to pack it, to store it, etc.

In one State the State extension director told me that I could not fool him on the old smearcase; that he had had enough of it. That same man attended one of these little luncheons, went home, and out of the State funds put on two more workers to do this very same work, because he had seen the various ways of using it that he had not before appreciated.

That brings up a question that is pertinent right here, and if you will pardon me I will refer to it for a moment.

If large quantities of this food is going to be manufactured, we must be sure that it is going to be consumed. To meet this need the domestic-science workers of the States Relations Service and the dairy division has organized a small group of workers to go into the market centers and make demonstrations there of the various ways of using cottage cheese. Four women, for instance, spent a week in Cleveland, and another week in Toledo. They made demonstrations before all sorts of organizations, such as women's clubs and school organizations, and they even went into some of the hotels and restaurants.

They made up a lot of these dishes and showed how palatable they were. At the present time this work is being extended to several other cities. On account of the interest created in this way, the demand for cottage cheese was largely increased. It is believed that through this demonstration work among the consumers we shall be able to encourage the consumption of the entire output that we are able to have made.

As to how much can be accomplished through all these efforts, I will simply say that this work last year was experimental: we had not done it before. We have done it now on an experimental scale, and we have gotten excellent results.

But we are just beginning it now on a large scale, and it looks most promising. Of course, results alone will determine its value, and we feel that by next fall we will know what can be done. I believe if any such results can be obtained as were gotten last fall, that the work should be extended even beyond its present scale, because certainly there is no great volume of food now in existence that is so valuable as this enormous quantity of skimmed milk that is largely used as animal food, and considerable of it wasted.

Mr. YOUNG of North Dakota. What is it that you make out of whey?

Mr. RAWL. Primost, which is simply evaporated whey. It is a food that the Scandinavians are fond of, but it is not generally used elsewhere.

In addition to that, milk sugar is made of it. In connection with the cottage-cheese work, these recipes will indicate certain uses for whey in baking. The farm housewife who makes cottage cheese should save every bit of the whey for baking purposes. It contains most of the sugar that was in the milk. This sugar does not taste as sweet as cane sugar, but it has as much energy in it.

Then, there is another way it can be used. It can be evaporated with a little cane sugar and made into what is called whey honey. There are all sorts of ways of using whey.

Mr. YOUNG of North Dakota. Is it worth more when used in that way than when used as food for pigs?

Mr. RAWL. Anything that is valuable as human food is more valuable when used direct than when used indirect through animals.

Mr. LESHER. You spoke awhile ago about there being more milk produced this year. What is the cause of that?

Mr. RAWL. There is 1.7 per cent increase in the number of dairy cattle, according to the report of the Bureau of Crop Estimates. That is one reason.

Another reason is that we are having a comparatively early spring. The milk production at the present time is perhaps above that for the same time last year. This is due largely to the pasturage conditions and the open spring.

Mr. HAUGEN. You say that there is an increase in cattle. That is an increase over what period?

Mr. RAWL. That is an increase over last year. The figures I gave you were the figures of the estimate which was made on January 1 by the Bureau of Crop Estimates. Their figures were given as 101.7 per cent as compared with 100 per cent January of last year.

Mr. HAUGEN. That is an estimate of the number of milch cows?

Mr. RAWL. Yes.

Mr. HAUGEN. What is the increase in other cattle?

Mr. RAWL. I suppose he was alluding to the dairy cattle. I have seen the figures, but I can not tell you what they are, off hand.

The CHAIRMAN. We are much obliged to you, Mr. Rawl.

I want to ask Mr. Harrison a question. I noticed in running over these estimates last night that practically all of these funds are proposed to be used for getting the information you have out to the public. Is that true?

Mr. HARRISON. That is true in practically all this work. It is proposed to use the funds almost entirely for extension work.

The CHAIRMAN. So it is a safe answer to the question to say that practically no investigational work is being contemplated in the estimates.

Mr. HARRISON. That is true. There are only a few cases where investigational work is contemplated. As a general rule, the funds requested will be used for emergency extension work—for getting accumulated information to the people and inducing them to apply it in practice.

The following statement shows, by projects, the allotment of funds made by the Secretary of Agriculture from the $885,000 appropriation provided by the food production act of August 10, 1917, "for the prevention, control, and eradication of the diseases and pests of live stock; the enlargement of live-stock production; and the conservation and utilization of meat, poultry, dairy, and other animal products":

Allotment of funds, by projects, under the food production act of August 10, 1917.

Project.	Original allotment.		Increase.		Total allotment.
	Amount.	Date.	Amount.	Date.	
BUREAU OF ANIMAL INDUSTRY.					
1. Eradication of cattle ticks	$191,190	Sept. 11, 1917			$191,190
2. Eradication of hog cholera	202,965	do			202,965
3. Eradication of tuberculosis, abortion, strangles, influenza, etc.	122,785	do			122,785
4. Production of beef cattle	15,000	Jan. 31, 1918			15,000
5. Production of pork	102,060	Sept. 11, 1917	$15,000	Jan. 31, 1918	117,060
6. Production of poultry	129,600	do			129,600
7. Production of sheep	12,000	Jan. 31, 1918			12,000
8. Making cottage cheese on the farm	21,850	Sept. 11, 1917	20,000	Feb. 11, 1918	41,850
9. Utilization of creamery by-products	21,850	do	11,100	do	33,950

II.

FOR PROCURING, STORING, AND FURNISHING SEEDS, AS AUTHORIZED BY SECTION 3 OF THE ACT, $8,000,000, AND THIS FUND MAY BE USED AS A REVOLVING FUND UNTIL JUNE 30, 1919.

Bureau of Plant Industry.

STATEMENT OF DR. WILLIAM A. TAYLOR, CHIEF OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

The Chairman. Dr. Taylor, your first item is, "For procuring, storing, and furnishing seed, as authorized by section 3 of the act, $8,000,000, and this fund may be used as a revolving fund until June 30, 1919." Your allotment for 1918 was $2,500,000, and this estimate is $8,000,000, which makes an increase of $5,500,000 over the fund for 1918.

Mr. Harrison. It is necessary to bear in mind, Mr. Chairman, that the urgent deficiency act carries an appropriation of $4,000,000 for the purchase and sale of seeds, making a total of $6,500,000 instead of $2,500,000 for the current fiscal year.

The Chairman. This would make an increase of $1,500,000.

Dr. Taylor. This is an appropriation which is exclusively an emergency appropriation. It is substantially a merchandising appropriation, and is to carry out the provisions of section 3 of the food-production act—

> That whenever the Secretary of Agriculture shall find that there is or may be a special need in any restricted area for seeds suitable for the production of food or feed crops, he is authorized to purchase or contract with persons to grow such seeds, to store them, and to furnish them to farmers for cash at cost, including the expense of packing and transportation.

The activity is organized to protect the production of the staple crops in territory where, without such protection, because of droughts, freezes, or other trouble, the normal seed supply would not exist. It is being used in exactly that way, not to carry on a general seed-merchandising business, but to insure the holding available for use in sections where the production is short seed which is required to maintain or increase production.

The Chairman. The first thing you do, of course, is to buy these seed yourself?

Dr. TAYLOR. Yes, sir. Rather, the first thing is to determine the territory within which the emergency condition exists; then to determine what crops within that territory are vitally important; then to locate and purchase the seed suitable for that particular territory; then to clean, pack, and make it ready; then to sell for cash and return the proceeds to the Treasury. Of course, these operations of purchasing and selling are of necessity to a considerable extent simultaneous, in that the demand is quite largely determined by the orders that are coming in for such seed.

The CHAIRMAN. Do you go out and ask for competitive bids or anything of that kind?

Dr. TAYLOR. Not for formal tenders. We locate the suitable seed. It should be said here that these activities have been practically restricted to such staples in the Southwest as corn varieties, kaffir, and other grain sorghums, peanuts, and cotton; in the middle plains region to grain sorghums. This would apply to western Oklahoma and western Kansas. In the northern plains region, to barley, oats, and to a small extent flax, the wheat-seed supply being protected in another way through cooperation with the Food Administration.

In the northern portions of the corn belt the early frosts and hard freezes of December greatly reduced the supply of germinable seed corn adapted to that territory, and that remark applies also to portions of the New England States. We are dealing with a small number of staple crop seeds in a large way in territory where an adequate supply of such seed is vital to the maintenance of production.

The CHAIRMAN. Some one made a statement on the floor of the House when the sundry civil bill was being discussed that you had spent about $200,000 for cotton seed. I think it would be very well for you to put into the record just how this fund of $2,500,000 has been handled for this past year, and just what the circumstances were that induced you to go into the buying of any particular kind of seed. I confess I was surprised that there should be any very large expenditure of money for cotton seed because I did not recall that there had been any flood or drought that affected last year's crop.

Dr. TAYLOR. Drought in Texas was the feature. In portions of Texas we found rather early in the fall, this money having become available on the 10th of August, that there was a portion of the State comprising 50 counties, exceeding the area of the State of Ohio by about 20 per cent, in which the supply of seed corn of adapted sorts was practically nothing. The drought had burned it out. The same was true in respect to cotton in that section, and almost true with respect to kaffir, although that is a very drought-resisting grain. Our problem was, therefore, to locate the seed before the corn could be fed and the cotton seed gotten to the mills and thus destroyed—to locate, secure it, and have it available for use for seed this spring.

The principle that was followed in that case applies to the other grains, except in the case of seed corn for the northern territory, where it has been primarily a problem of working out the location of small quantities of seed corn that are scattered about on the individual farms, and making this available for seed.

But the primary purposes, as in the case of the Texas cotton, kaffir, and corn was to hold that suitable seed to keep it from going to the feed trough in the case of corn and the oil mill in the case of cotton seed.

The CHAIRMAN. With the funds you had available in the food production act and the funds made available in the sundry civil act, have you had any difficulty in keeping up what is a fair insurance against seed shortage?

Dr. TAYLOR. We feel that we have been able to fairly meet that, and had the urgent deficiency money become available by the 1st of February as we hoped it would, instead of the last day of March as it did, we could have gone considerably further with advantage in the Southwest.

The CHAIRMAN. Have you had any demands for these seeds that you could not fill in any sections of the country?

Dr. TAYLOR. No; because our demands and our operation have practically moved simultaneously up to the present time. We now have a feature to handle with reference to the magnitude of the supply needed for replanting which is almost purely a matter of judgment.

The CHAIRMAN. Let me ask you this question. It seems to me if you are conducting these operations as you describe them—that is, waiting until you get a demand before you locate your seed—am I correct in that idea?

Dr. TAYLOR. Not strictly. It is rather this way. The probable demand is determined as nearly as it may be by surveys conducted through the extension forces of the various States. Purchasing begins on a basis of those surveys before there is any actual ordering by the farmers.

The CHAIRMAN. You gave me the wrong impression in regard to the matter. Let us see how it is. You make a survey of the situation through your field force as to an anticipated shortage in seed?

Dr. TAYLOR. Yes.

The CHAIRMAN. And you promptly begin, in good time, to meet that anticipated demand for seed?

Dr. TAYLOR. Yes.

The CHAIRMAN. Which means that you go in and buy your seed and hold it until the demand comes: is that the idea?

Dr. TAYLOR. Buy, prepare, and to a large extent, through the extension forces, make known to the farmers the fact that the seed is ready, and that it can be had. By that time we are able to announce an approximate cost price.

The CHAIRMAN. My line of inquiry leads me to make this suggestion. It seems to me—and I may be entirely wrong about it—that you might save yourself much work if you conducted your surveys, located your anticipated demands, and then located also your seed for that particular territory and then advised your people in that territory that the seed was there, the Government might not go into the business of actually buying the seed, but it might locate the seed and advise the people where they could get it. What do you think about that proposition?

Dr. TAYLOR. We do a great deal of that through our seed stocks committee informing the farmers and the extension forces as to where particular seed is. But as soon as an acute shortage develops for a particular thing, as for instance in the case of the Texas corn,

it is necessary actually to buy and hold that corn. Last September and corn was around $2.00 a bushel then and was being fed, it was not possible to replace it from elsewhere with corn suited to the drought stricken region.

In the case of the small grains, such as oats, for instance, the varieties of which are adapted through wide ranges of territory, it is much less necessary to buy far ahead of the demand, but in Texas you have got to buy in the fall to save that local corn from the feed trough, and you can not expect to sell very much of it until toward spring, because the farmer is not in a position to finance his purchases in a drought stricken region like that until planting time approaches. There are numerous angles and points of view from which it has to be considered practically simultaneously.

Mr. HAUGEN. You spoke of the frost in December injuring the seed. Did you have reference to seed corn?

Dr. TAYLOR. Yes.

Mr. HAUGEN. Did you mean December, or earlier?

Dr. TAYLOR. I meant both December and September.

Mr. HAUGEN. Did the frost in September damage the corn so as to effect its germination?

Dr. TAYLOR. The frost in September throughout the northern tier of States along the Canadian boundary killed the corn, and a great deal of it was in the dough stage—the summer had been cold—so that the crop was soft, not what is called soft corn in Iowa and Illinois, but a real roasting eat.

Mr. HAUGEN. Was any considerable amount of that fit for seed?

Dr. TAYLOR. No; it was practically wiped out by the frost.

Mr. HAUGEN. What has been done by the farmers as to seed corn?

Dr. TAYLOR. In December much of the high moisture content corn that had been selected by farmers to be saved for seed was frozen hard by the below-zero temperatures in the cribs and barns.

Mr. HAUGEN. That killed it entirely?

Dr. TAYLOR. That very greatly reduced its germinability.

Mr. HAUGEN. What has been done to supply seed?

Dr. TAYLOR. Take the northern corn belt——

Mr. HAUGEN (interposing). Take practically the whole corn belt.

Dr. TAYLOR. Taking the northern corn-belt territory, a very active home-testing campaign was put on promptly by the extension forces to determine just what the need was and the extent to which the individual farmer could, by any possibility, protect himself.

Mr. HAUGEN. How extensive was that campaign? I got a bill the other day for $80 for 8 bushels of seed corn, and I am afraid it is not good seed corn at that.

Dr. TAYLOR. It should be, in Iowa.

Mr. HAUGEN. It should be at that price, but I do not think it is.

Mr. OAKLEY. There is a fair supply of seed corn of good quality moving in Iowa, at fair prices.

Mr. HAUGEN. Was any of that paid for out of this fund?

Mr. OAKLEY. There is being accumulated in Iowa at the present time, in particular for the planting time demand and the replanting demand, a maximum quantity of 50,000 bushels for Iowa.

Mr. HAUGEN. That is being accumulated now?

Mr. OAKLEY. At three points.

Mr. HAUGEN. How can you get it if it is not there?

Mr. OAKLEY. By working over old corn and carefully working over and testing 1917 corn.

Mr. HAUGEN. Have you been through the corn belt?

Mr. OAKLEY. Yes, sir; I live in the corn belt.

Mr. HAUGEN. How much of last year's corn is available or fit for seed?

Mr. OAKLEY. I could not give you the exact percentage, but we have an actual surplus in the case of certain counties in Iowa. There is much more on the farms than some had estimated. We will not know how much of it is good for seed until it is tested.

Mr. HAUGEN. Was any of it accumulated and distributed through this appropriation?

Mr. OAKLEY. It has been distributed through the extension service acting as intermediary, putting the purchasers and buyers in contact. The movement of seed corn has been stimulated in that way, thereby taking care of the immediate planting needs to a considerable extent.

Mr. HAUGEN. The reports I get are that they can not get seed except what is shipped in.

Dr. KELLERMAN. The extension service has indicated that the supplies for the present planting are fairly adequate, so that it has seemed feasible to follow the line suggested by Mr. Lever.

Mr. HAUGEN. Has the supply which is available been tested?

Dr. KELLERMAN. Those are all tested supplies.

Mr. HAUGEN. I was informed the other day that some of it had only been tested up to 30 per cent.

Mr. OAKLEY. That is unfortunately true in some cases.

Dr. KELLERMAN. Many of those cases are cases of sales in perfectly good faith, the original tests having been good, but the corn having deteriorated.

Mr. HAUGEN. It seems to me if we are going to do anything we ought to assemble this corn in due time. We ought to get at it in the fall when it can be secured and not wait until planting time. We do not get good results in that way.

Dr. TAYLOR. This has all been under way since the freeze of December, which was unusually severe, and damaged the seed that had been held out of the crop for planting, and in general this is the situation as our advices indicate.

Mr. HAUGEN. Will you state what is being done now, because that question will probably be asked a hundred times on the floor of the House. What are you doing about supplying the people with seed corn; the people in the corn belt? Do you go to the crib, select it, prepare it, and sell it, or what?

Dr. TAYLOR. The farmer who has corn that shows a sufficient germinability to be worth while goes to his crop and works it over, and, as we say, ear tests the promising ears to locate those of high germination; and that ear-tested corn is the commercial seed corn.

Mr. HAUGEN. You say the crop. What crop have you reference to, last year's corn crop?

Dr. TAYLOR. In some sections last year's and in some sections the whole remainder of the crop of 1916. In some portions of Iowa there was practically no germinable corn after the freeze of the middle of December, so in some sections it has been necessary to go out-

side of the State to other States where there is corn fairly well adapted——

Mr. HAUGEN (interposing). You would not recommend that for seed, would you?

Dr. TAYLOR. In some cases it is all that can be done.

Mr. HAUGEN. If shipped for any considerable distance, that would be an absolute failure.

Dr. TAYLOR. It has been necessary to move as nearly as practicable on the same lines of latitude. It has been necessary in some cases to go somewhat south of the latitude where there is quick-maturing corn. For instance, 90-day corn in Delaware, which is the best, in fact, is practically the only corn available for portions of northern Ohio and the Lake region where the summers are cooler. That has been true both with respect to activities of the States, some of which have been proceeding along lines practically identical with those of the department, and to some extent by commercial seedsmen.

Mr. HAUGEN. I have been asked at least fifty times what the department is doing about supplying the people of Iowa with seed corn. What will be the answer to that?

Mr. OAKLEY. Four thousand bushels of seed corn have been actually purchased by the department, and about 15,000 bushels are being tested now.

Mr. HAUGEN. Has the department bought all of that?

Mr. OAKLEY. The department has purchased that quantity.

Mr. HAUGEN. How much did the department pay for it?

Mr. OAKLEY. It cost the department about $4 to $4.50 per bushel.

Mr. HAUGEN. What is it being sold for?

Mr. OAKLEY. The price has not been fixed because the overhead charges have not been determined.

Mr. HAUGEN. Can you approximate the price?

Mr. OAKLEY. If we get corn around $5, the approximate price will be $5.50 or $5.75 per bushel.

Mr. HAUGEN. Would I be safe in saying that it is being sold by the department at $6?

Mr. OAKLEY. You are safe in saying that it is being sold or will be sold by the department for $6 or less.

Mr. HAUGEN. Four thousand bushels have really been bought, and 15,000 are being tested?

Mr. OAKLEY. Yes; and if the needs appear as they now seem to appear, a maximum of 50,000 bushels will be available for Iowa farmers from the department reserve supply.

Mr. HAUGEN. Does your operation extend over the whole State?

Mr. OAKLEY. That depends on the replanting demand. If there is a replanting need south of the center of the State, it will be included.

Mr. HAUGEN. Does this simply apply to the replanting?

Mr. OAKLEY. This is for the late planting and replanting also.

Mr. HAUGEN. What about the early planting?

Mr. OAKLEY. We hope the available supply will be sufficient to take care of the early planting—for the man who gets his seed three weeks or a month in advance of the planting time.

Mr. ANDERSON. What does a man have to do if he wants to buy seed corn from the Government?

Dr. TAYLOR. If he is in Minnesota?

Mr. ANDERSON. Anywhere.

Dr. TAYLOR. There is no attempt to supply seed corn generally throughout the country, but only in the restricted territory.

Mr. ANDERSON. Obviously a man can not get seed corn from the Government where the Government does not sell it; but where it does sell it, how does he go about getting it, and where does he get it?

Dr. TAYLOR. That depends on the State where he is located.

Mr. ANDERSON. Take any State you want to take.

Mr. OAKLEY. In the case of Minnesota he would get in touch with Mr. C. W. Warburton, in Minneapolis, 320 Flour Exchange.

Mr. ANDERSON. How does he know where to go?

Dr. TAYLOR. That information is widely circulated through the territory where the sales are being made.

Mr. ANDERSON. I read about 100 papers in Minnesota, and I have never seen any notice of that in any one of them yet.

Mr. OAKLEY. Minnesota has taken care of her needs fairly well by going outside of the State, through commercial agencies, and also by bringing about a proper distribution of supplies within the State, and sees in sight enough seed corn for first planting needs. In general there is very little replanting in Minnesota. There is an actual shortage in some of the northern counties.

Mr. ANDERSON. As usual, Minnesota is taking care of herself.

Mr. OAKLEY. If you wish to put it that way.

Mr. HAUGEN. Ten dollars a bushel is the price in southern Minnesota. Evidently they have not any seed corn up there, and the Government is not doing anything to supply them.

Dr. TAYLOR. The seed you bought came from Minnesota?

Mr. HAUGEN. It is bought from a Minnesota farm. I live on the State line.

Dr. TAYLOR. A large proportion, and, in fact, by far the larger proportion, of seed corn sold this year has been sold by the usual seed-corn handling agencies rather than by the Government.

Mr. HAUGEN. But nobody seems to know anything about the Government activities. As Mr. Anderson has stated, he reads the papers and has found no reference to it in the press. I have had a number of Members of the House come in inquiring about seed corn. I have not heard of a single bushel being bought or sold by the Government in that section.

Dr. TAYLOR. The publicity is largely through the county-agent machinery, operating directly with the farmers in the States.

Mr. HAUGEN. Will you give the name of the one in charge in Iowa?

Mr. OAKLEY. We are operating through the State extension director, Mr. R. K. Bliss, of Ames. Mr. Bliss will be able to give his county agents, or anyone inquiring about it, full details regarding the corn that is and will be available for sale.

Mr. HARRISON. These purchases are being made out of the $4,000,000 appropriation, which only recently became available.

Mr. HAUGEN. What are you doing about wheat? The Food Administration has been urging our people to sow wheat, and they have been buying seed. Was that through your department?

Dr. TAYLOR. In the case of wheat, an agreement was entered into with the Food Administration through which there was permitted to be held available for use as seed in the territory where seed spring wheat would be needed such lots of spring wheat as were examined

for purity and germinability and approved by the Department of Agriculture representatives. This frees it from the 30-day storage restriction that applies to wheat generally, in order that there might be held in the producing territory, or as near the producing territory as possible, a sufficient quantity of spring wheat suitable for seeding. The Food Administration has permitted in such cases a small advance in price above the food price of such wheat.

Mr. HAUGEN. Can you give the amount?

Dr. TAYLOR. Not to exceed 15 per cent, to cover the costs of cleaning, storage, insurance, and holding.

Mr. HAUGEN. You mean 15 per cent was to cover storage, cleaning, and handling?

Mr. OAKLEY. That is based on the grain corporation's price for the particular grade of wheat at that particular point.

Mr. HAUGEN. On wheat selling in Minneapolis for $2 you would allow 30 cents?

Mr. OAKLEY. That is it, exactly.

Dr. TAYLOR. On wheat that had been definitely inspected and approved for seed.

Mr. HAUGEN. Has the wheat which is being shipped into Iowa been inspected, and have we any assurance that it is free from all foul stuff?

Dr. TAYLOR. In so far as we have any knowledge of any wheat shipped into Iowa for seed, it is inspected wheat.

Mr. YOUNG of North Dakota. There is probably some profit to the grain corporation in the 15 per cent increase, is there not?

Mr. OAKLEY. That does accrue to the corporation and is intended to cover interest, carrying charges, and cleaning, and all losses sustained by the elevator men or warehouses handling the wheat.

Mr. HAUGEN. Are we to understand that the commission man gets the 15 per cent?

Mr. OAKLEY. No: the elevator man in the country districts.

Mr. HAUGEN. If it is bought in Minneapolis?

Mr. OAKLEY. If it is bought in Minneapolis, he would have to bear the transportation charges back to the farm.

Mr. HAUGEN. I have heard many reports about prices of all kinds.

Mr. OAKLEY. They paid the corporation prices. There should have been an abundance of a supply in Iowa. All of that wheat except a small percentage was inspected by our own inspectors, but we had to lift the restrictions because of the railroad situation.

Mr. HAUGEN. That was sold at 15 per cent profit over the regular prices?

Mr. OAKLEY. Much of it was sold at less than 15 per cent profit, because it was grain-corporation wheat.

Mr. HAUGEN. Not to exceed 15 per cent?

Mr. OAKLEY. Not to exceed 15 per cent, except to add the cost of transportation, and in some cases 15 per cent was paid. I am not speaking of any purchases of any seedsmen, because the seedsmen are not restricted, except in a moral sort of way, in the price they shall ask for seed wheat.

Mr. YOUNG of North Dakota. A great quantity of wheat for North Dakota was shipped down into Minneapolis and shipped back again for seed purposes, and I was wondering why they had not held more

of that wheat in North Dakota in order to save the farmers up there from paying the freight on that wheat both ways, which they did.

Dr. TAYLOR. What happened in the case of wheat was the location of the good lots as they were in the process of movement, and as quickly as they reached places where the inspectors were they were sampled and their suitability determined and then held where they were.

The best way would have been, unquestionably, in a case like that, to have had field inspectors while the crop was growing, and to have determined where the product of each field should be held for seed, and then have held them at the place where they could be used.

Mr. YOUNG of North Dakota. I assume the lateness of the appropriation coming to you would affect the North Dakota situation. It meant a serious advance in the cost to pay the freight both ways to and from a place so far away as Minneapolis.

Mr. HARRISON. That is why we are suggesting a large fund as an insurance for next year.

Dr. TAYLOR. It should be clear that this is a revolving fund for this fiscal year merely. It ceases on June 30, and this is an estimate to cover the next fiscal year, in the event that emergencies of this character arise. We believe it is not an undue insurance provision, in the light of the experience of this year and the year before. Although it may not be necessary in the same sections it is practically certain to be needed somewhere in the country.

EMERGENCY PURCHASE AND SALE OF SEED TO FARMERS BY UNITED STATES DEPARTMENT OF AGRICULTURE DURING THE FISCAL YEAR 1918.

With a view to enabling the Secretary of Agriculture to make available seed of food and forage crops to farmers where emergencies might arise in the supply of such seeds, Congress made the following provision in the food-production act of August 10, 1917:

"SEC. 3. That whenever the Secretary of Agriculture shall find that there is or may be a special need in any restricted area for seeds suitable for the production of food or feed crops, he is authorized to purchase or contract with persons to grow such seeds, to store them, and to furnish them to farmers for cash, at cost, including the expense of packing and transportation."

After the approval of the food-production act, August 10, 1917, the department, being aware of unusual drought conditions throughout the country, proceeded at once to make general surveys in anticipation of need for utilizing the authority vested in the Secretary of Agriculture to purchase and sell seed to farmers for cash at cost. The general surveys clearly showed the need for such action and the department at once commenced more detailed surveys in cooperation with the extension service of the States, with a view to collecting data upon which to base reliable estimates of the needs for seed in the various counties. The data in the possession of the department clearly indicated the greatest need of assistance, due to drought damage to crops, was in southwest Texas, western North Dakota, eastern Montana, and parts of Oklahoma and Kansas. Crops were injured by drought in other parts of the country, including Washington, Oregon, and Idaho but the damage in these sections was less severe and not so widespread as in the sections above mentioned.

After determining the general areas needing help from the department to provide an adequate seed supply, the department organized these areas into districts and placed representatives in each district to superintend the purchase and sale of seeds to farmers. The department cooperated closely with State agencies not only in making surveys of the needs of the various sections, but in the matter of determining the kinds of seed that should be supplied and the general methods of purchase and sale. In no case has the department purchased seed unless it was clearly shown that such action was necessary to prevent seed from being utilized for purposes other than seeding, or where there was an actual shortage in the supply that could not be provided for satisfac-

torily by commercial agencies. Where it was thought that commercial agencies were equipped to handle the situation the department did not enter the field.

Later this was augmented by an appropriation of $4,000,000 in an act "making appropriations to supply urgent deficiencies in appropriations for the fiscal year ending June 30, 1918, and prior fiscal years, on account of war expenses and for other purposes," approved March 28, 1918, under the following provisions:

"For additional for procuring, storing, and furnishing seeds as authorized by section three of the act entitled 'An act to provide further for the national security and defense by stimulating agriculture and facilitating the distribution of agricultural products,' approved August tenth, nineteen hundred and seventeen, including not to exceed $5,000 for rent and personal services in the District of Columbia, $4,000,000, which may be used as a revolving fund until June thirtieth, nineteen hundred and eighteen."

The provision for assistance, for which these appropriations were made, clearly indicates that the department should use the funds available only for the purchase of seed for sections where an emergency in the supply of seeds exists, or where the best data available should indicate that such emergency might exist before the arrival of the next planting season.

In making purchases of seed for the various districts the department's representatives utilized the services of the employees of the State agricultural colleges and experiment stations, who assisted materially in locating, inspecting, and buying seed. All of the seed purchased was carefully inspected, tested, and where necessary cleaned and graded, so that all seed offered for sale by the department has been of high quality, though not of specially selected strains.

In view of the necessity for quick action in buying seed it was not possible for the department to wait to secure definite orders from farmers before accumualting stocks, therefore the purchases were based on conservative estimates of needs and, to a considerable degree, in advance of actual orders from farmers. Tentative allotments of seed were made to counties in each district in accordance with their needs and the county agents of these counties, or other agencies, were notified of these allotments in order that they might advise their farmers and assemble orders to permit of shipment of seed in bulk, thus facilitating distribution and reducing the cost of transportation. The department found it necessary to place a limit on the quantity of seed to be sold to any individual farmer in view of the inadequacy of the funds available at the outset of the work to supply the needs fully.

SECTIONS WHERE SEED IS BEING SOLD TO FARMERS BY THE DEPARTMENT.

Below is given a list of the districts in which the department has sold and is selling seed to farmers, together with information regarding the special features of the work in each district.

Southwest.—The data obtained from the surveys made by the department in cooperation with the State authorities of the seed needs of southwest Texas indicated the desirability of providing seed of corn, cotton, sorghums, Sudan grass, and peanuts.

The supply of seed corn adapted to the needy areas in Texas was in danger in the early fall of being fed to live stock; therefore it was necessary for the department to purchase such seed as could be obtained early in the season and hold for farmers' planting needs. An insufficient quantity of seed of cotton was produced in the section of Texas covered by the department for the planting needs; and this was also true in the case of sorghums and peanuts. It was necessary therefore to purchase these seeds in other parts of the State and ship them to an assembling point from which they could be distributed to the needy area. The department detailed a representative to the emergency seed work in Texas and selected Waco, Tex., as an assembling point from which the seed was to be sold to the drought-stricken territory.

Northwest.—This area includes western North Dakota and eastern Montana. The most serious need in this district was for seed of oats, wheat, barley, and flax. The relative importance of this need was determined by careful surveys in cooperation with the State officials. Since the United States Food Administration Grain Corporation was organized for the purpose of buying and handling wheat arrangements were made in cooperation with this organization whereby elevator owners and warehousemen could store wheat for

seed, with permission to charge not in excess of 15 per cent above the purchase price based on the prices of the grain corporation for wheat of the particular grade. Wheat so stored was inspected by the department's representatives, and only the lots that were approved by the department were held in accordance with the grain corporation's regulations. Further to insure a sufficient supply of spring wheat suitable for seed the grain corporation, at the suggestion of the department, stored considerable quantities of good seed wheat at points accessible to the areas in which seed wheat was needed. This cooperation of the grain corporation made it unnecessary for the department to purchase and sell seed wheat to farmers in the Northwest.

The department detailed a representative to have charge of the emergency seed work in the Northwest district, and in view of the fact that only a limited quantity of seed could be purchased locally in the district it was found advisable from all standpoints to purchase, clean, and store the seed at Minneapolis and ship in carload lots to points where needed. The seed grain purchased by the department was of good commercial quality, carefully cleaned, and of high germination.

South Plains.—The need for action on the part of the department to supply seed of sorghums to parts of Oklahoma and Kansas, where crops were damaged by drought, was made evident by careful surveys and data presented by authorities of these States. A representative of the department was placed in charge of the emergency work in this district, with headquarters at Wichita, Kans., and Clinton, Okla. Since the work was organized it was found advisable to include parts of Colorado and New Mexico in this general district.

An emergency in the supply of seed corn in the northern part of the corn-producing area.—Next to the emergency in the supply of seed caused by the drought of 1917 the greatest demands for such assistance as could be rendered by the department, through its authority to purchase and sell seed to farmers, were from the northern part of the corn belt, where frosts and severe freezes in the fall of 1917 injured the vitality of seed corn and caused a serious shortage of supply. The department was called upon to assist in every way possible to relieve the critical seed-corn situation, and it cooperated with the State authorities in the States where the need was most acute in order to make available a supply of seed that would not otherwise be made available, and to purchase stocks to be sold to farmers in sections where seed could not otherwise be had.

In conducting this work two general methods have been followed. One, by utilizing such agencies as were at its command to assist in purchasing corn of the crop of 1916 and such corn of the crop of 1917 as gave evidence of being viable, and by selection secure supplies of seed from these stocks. In this way the seed corn thus selected was made available in the counties where it was produced. Two, in certain sections an insufficient quantity of old corn and viable new corn existed for seed purposes, therefore it was necessary to utilize stocks grown in other States by purchasing and importing them. By the former method the department has made available, and is now making available, stocks of seed corn in Iowa, Nebraska, and Illinois. By the latter method it has provided stocks for North Dakota, Wisconsin, Michigan, Ohio, and Indiana.

While the seed-corn saving campaigns which have been actively conducted by the department and the high prices for seed corn have resulted in the accumulation of relatively large stocks of seed, much of the seed corn now available through farmers and commercial agencies has not been thoroughly tested for germination and an unusually large percentage offered for sale and actually sold to farmers will germinate so poorly as to produce an unsatisfactory stand when planted.

Seed-corn testing campaigns have been pushed vigorously, but at best probably not more than 25 per cent of the farmers in the northern part of the corn belt will make germination tests of their seed corn before planting. Under normal conditions farmers are slow in providing for their seed requirements. This year they have been urged to do so far in advance of planting time.

As a result of the unusual conditions affecting the quality and supply of seed corn this year, an actual shortage of seed which may not be apparent at this time may develop at planting time, and that much poorly viable seed will be planted, thus necessitating extensive replanting. It is also possible that in some parts of the corn belt unfavorable weather conditions will necessitate extensive replanting. The urgent need for a large production of corn this year makes it imperative that all practicable steps be taken to provide an

ample supply of as good seed corn as can be had for late planting and replanting needs. It has appeared very necessary therefore that the department should use a part of the funds that are at its disposal for purchasing reserve stocks in anticipation of the special needs that may exist for seed corn for late planting and replanting. The department recognizes the risk of loss in connection with the accumulating of seed corn for which definite orders are not in hand, in view of the fact that there is a wide margin between the price of commercial corn and seed corn at this time. It has studied the situation carefully, however, and from the best data available it is accumulating reasonable reserves of seed corn for late planting and replanting requirements for the sections in which there is an emergency in the supply of good seed corn, including parts of Minnesota, Iowa, Nebraska, Illinois, Indiana, Wisconsin, Michigan, and Ohio.

Seed corn will be located at points convenient for distribution in these States, and farmers are being notified that this seed is available and can be purchased from the department for cash at cost. They are requested to communicate with their county agents, or if they are in counties having no county agent to write at once to the director of extension of their State. A list of the names and addresses of the directors or extension in the States in which the reserve seed corn is available is given below:

Illinois: Eugene Davenport, Urbana, Ill.
Indiana: G. I. Christie, La Fayette, Ind.
Iowa: R. K. Bliss, Ames, Iowa.
Michigan: R. J. Baldwin, East Lansing, Mich.
Minnesota: A. D. Wilson, University Farm, St. Paul, Minn.
Nebraska: C. W. Pugsley, Lincoln, Nebr.
Ohio: C. S. Wheeler, Columbus, Ohio.
Wisconsin: H. L. Russell, Madison, Wis.

The appropriation of $4,000,000 in the urgent deficiency act of March 28, 1918, did not become available in time for the department to utilize it fully for the purposes for which the estimates for the appropriation were made. A part of it, however, is being used to purchase seed corn for sections where there is an emergency in the supply.

III.

FOR THE PREVENTION, CONTROL, AND ERADICATION OF INSECTS AND PLANT DISEASES INJURIOUS TO AGRICULTURE, AND THE CONSERVATION AND UTILIZATION OF PLANT PRODUCTS, $911,300.

Bureau of Plant Industry.

STATEMENT OF DR. WILLIAM A. TAYLOR, CHIEF OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF ARGICULTURE—Continued.

The Chairman. Your next item, on page 11, is "For the prevention, control, and eradication of insects and plant diseases injurious to agriculture, and the conservation and utilization of plant products, $911,300." Your first item under that head is for "Cereal-smut eradication." Your allotment for this purpose in 1918 was $87,500, and the estimate for 1919 in this bill is $100,000, which is an increase of $11,500.

Dr. Taylor. Cereal-smut eradication is an extension project conducted by the Bureau of Plant Industry in cooperation with the States.

The department is conducting an active campaign to control the ravages of grain smuts which cause annual losses of wheat, oats, barley, and rye, estimated as aggregating 90,000,000 bushels. During the past seven months from 17 to 42 field men have been engaged in this work. Several of these men have been employed constantly

in Oregon, Washington, California, Georgia, Alabama, and Oklahoma. During the fall and spring months work has been carried on in Colorado, New York, Ohio, Michigan, Indiana, Illinois, and Kentucky. During the spring months work has been in progress in Minnesota, North Dakota, South Dakota, Iowa, Kansas, Nebraska, Missouri, Wisconsin, and Idaho. It is planned to include work in the New England States, Arkansas, New Mexico, and Mississippi. These field men have been working in cooperation with the State extension forces and have succeeded in convincing thousands of growers of the practicability of seed treatment as a means of preventing smut. The treatment of not less than 4,000,000 bushels of seed grain has been secured as a result of these efforts. County agents have been instructed by actual demonstrations in the details of seed treatment, and these demonstrations also have been carried into the public and moyable schools. The campaign already has aroused widespread interest, and, in order to secure the most effective results, it should be continued for at least another year, and, if possible, for the period of the war. It is believed that another year's work will result in a reduction of the present annual losses by from 50 to 60 per cent. Furthermore, the continuation of the work will develop more fully the facts concerning the distribution of the different smut species and of the losses caused by each, so that the department's efforts may be concentrated more effectively on those localities where the losses are greatest.

The actual effectiveness of the work done can not be determined until the crops now growing come through. It is believed, however, that the protection of the large amount of seed grain that has resulted from this combined campaign of the department and the States, will very materially reduce the damage from smut to these important cereals.

The CHAIRMAN. Is any portion of this fund going to be used for the stripe rust?

Dr. TAYLOR. No, sir. This relates exclusively to cereal-smut eradication.

The CHAIRMAN. The next item is "Peanut conservation and utilization." Your allotment for 1918 was $7,500, and the estimate in this bill is $15,000, which is an increase of $7,500.

Dr. TAYLOR. Since the production of peanuts is being undertaken over extensive areas by persons who are relatively unfamiliar with the crop, it is important that experienced men shall be assigned to assist the demonstration agents in securing the adoption of the best methods of harvesting and handling. This is necessary in order that the product may be in suitable condition for human consumption or for the manufacture of oil.

The funds under the food-production act of August 10, 1917, for this work during the current fiscal year became available too late in the season to organize the field work with full effectiveness. A campaign of instruction, however, was carried on during the harvesting and thrashing period, and a number of articles were published in newspapers and the agricultural press in various sections of the South. A special circular on the subject also was issued by the department.

The peanut is becoming of such great importance as a food crop that every effort should be made to conserve and utilize it to the best

advantage. The present outlook is that a large increase in acreage may be expected in regions where the peanut industry is now, and this makes it important that considerable work be undertaken in the demonstration of proper methods of harvesting, stacking, and handling peanuts. Considerable loss usually occurs in all new regions because of lack of knowledge of the proper methods of handling the crop. Actual demonstrations of the methods in practice among the best growers should add greatly to the value of the peanuts grown. It is planned to undertake work next year in Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Louisiana, Texas, Arkansas, and Oklahoma, in close cooperation with the extension forces in those States.

This is a project which continues to require attention because of the rapid extension of the crop into new territory, where it is important both as a food and as a feed crop. The work is substantially instructive through specialists in the territory where the need exists—through the county agents and the State extension forces. It consists chiefly of putting on special drives for better harvesting, curing, and treatment of the crop, which, to a large exent, determines its commercial value and its quality after it is grown.

The CHAIRMAN. Is anything being done in the matter of teaching the people how to use peanuts advantageously?

Dr. TAYLOR. That feature is being taken care of through the home economic work in the State relations service.

Mr. HAUGEN. You said before, I believe, that the item of cereal-smut eradication did not deal with the stripe rust. Have you an item dealing with the stripe rust?

Dr. TAYLOR. Not under the emergency bill. There is a provision for that in the regular bill.

Mr. HAUGEN. What is being done about that now? Are you organizing that? I notice by the home papers that everybody is going after the barberry bushes.

Dr. KELLERMAN. That is a department campaign that is actively under way, and it will be pushed very actively during the coming year. We are at work, and we are increasing our force as rapidly as we can find suitable men.

Mr. HARRISON. We took the matter up first with the governors of all the States concerned to get their cooperation, and also to get the cooperation of the State councils of defense. We also took it up with the extension agencies.

Mr. HAUGEN. Your work is all pretty well under way?

Dr. KELLERMAN. Through the various sections throughout the upper Mississippi Valley.

Mr. YOUNG of North Dakota. I notice in Michigan they are getting excited about it.

Dr. TAYLOR. Practically from Lake Huron westward from northern Indiana, Illinois, and Iowa—northward the barberry campaign is on.

Mr. HAUGEN. In the work, which was started by your department, you first took it up with the governors of the States?

Dr. TAYLOR. With the hearty cooperation of the State authorities, and also with the State extension service. It is a type of activity that must command united interest and work to succeed. We have

a very efficient barberry poster that is being circulated in that territory.

Mr. HAUGEN. The same line of work is being done in Denmark and Sweden.

Dr. TAYLOR. I have not seen the Danish poster, but our poster is being placed in post offices and stores and places where the village people can see it, because it is important to get the interest of the village people as well as that of the farmer.

Mr. HAUGEN. Those posters are being put up in the post offices?

Dr. TAYLOR. One hundred thousand of them throughout the spring-wheat territory, where the rust is most destructive.

Mr. HAUGEN. You are carrying on a campaign similar to that which was conducted in Denmark, Sweden, and other countries?

Dr. TAYLOR. Yes, except that they compel; while only in two States, I think, as yet, have we any legislation that compels barberry eradication. There is this feature of the barberry campaign which it would be well to have in mind, and that is that not all of these barberries are injurious to wheat production. The Japanese barberry is immune to the rust, and that fact is rather fortunate with respect to this campaign in the towns and villages, because barberries are very popular hedge and garden ornamentals. Our suggestion in the campaign, of course, is to cut out the common barberry, which carries the rust, and leave, or replace it with the Japanese barberry, which while somewhat more irregular in growth is capable of producing substantially the same landscape effect. This applies, of course, to the parks and cemeteries. We had inquiries recently from a leading landscape gardener in the West, whose plantings are famous in the city of Chicago, as to whether he ought to cut out barberry, which is an important shrub in his whole landscape scheme. We told him that we thought he should, as we did not believe it was safe.

Mr. HAUGEN. Are you satisfied that a certain type of barberry bush is the only host for the black rust in its first stage?

Dr. TAYLOR. It is not the only host, because the rust does, in fact, winter over to some extent on the grasses, but the barberry is the host that gives the rust its strong start in the spring, away ahead of the spring wheat, if the climatic conditions of the season are favorable.

Mr. HAUGEN. Are you satisfied that by eradicating the barberry bush you can also exterminate the black rust?

Dr. TAYLOR. We can at least control it sufficiently to let the spring wheat crop get by.

Mr. YOUNG of North Dakota. Is it practically an assured thing as far as the spring-wheat area is concerned?

Dr. TAYLOR. It would be incorrect to say we can eradicate the rust entirely through the eradication of the barberry bush, but rather that we can so reduce its foothold and retard its carried-over start in the spring that the spring wheat which now is caught in the milk or ahead of that stage can mature.

Mr. LEE. Is this bush anything like the privet plant that we use for hedges in the South?

Dr. TAYLOR. No; it has thorns on it and it has brillantly red-colored berries.

Mr. LEE. Do you have reference to what we call the redberry bush?

Dr. TAYLOR. This kind has sharp thorns on it.

Mr. Lee. Yes.

Dr. Taylor. The barberry that carries its fruit in clusters rather than singly, the leaf edges of which are sawtoothed rather than smooth. The smooth-leaved one that carries its berries single is the Japanese barberry, which is immune.

Mr. Lee. The other one has thorns on it?

Dr. Taylor. Both have thorns.

Mr. Young of North Dakota. They come in groups of three?

Dr. Taylor. Yes; on the one which spreads the rust.

The Chairman. The next item, on page 12, is "Control of cotton, truck, and forage-crop diseases." The allotment in 1918 was $26,400, and the estimate in this bill is $127,550, which makes an increase of $111,150.

Dr. Taylor. This is an important project, the need for which has become very evident as the work has gone forward.

Under an allotment of $19,200 from emergency funds, efforts have been made during the current fiscal year by specialists in plant diseases, in cooperation with potato specialists, to locate for bean growers in the Northeastern States a supply of disease-free seed and to determine the soundness of seed potatoes in the Central and North-Central States. Cooperation is also being maintained with the food products inspection service of the Bureau of Markets through the detail of pathologists to study diseases of vegetables in the terminal markets, to advise the inspectors relative to their identification and effect upon keeping quality, and to take steps toward lessening these losses. At the request of the War Department, men have also been detailed to advise depot quartermasters relative to the inspection of perishables for the presence of plant diseases, and a considerable saving has been effected through their work.

The department is facing a greatly increased demand from farmers, through their farm bureau organizations and county agents, for practical assistance in the control of plant diseases, which cause enormous annual losses. For all the diseases included under this project effective control measures already are available. The work is conducted in close cooperation with the State extension agencies and it is planned to expand the pathological force of the Bureau of Plant Industry to a point where it can effectively meet the demands made upon it.

It includes, as you will note on page 13, where it is subdivided, a group of workers on cotton diseases, for whom the estimate is $21,520. Active work will be undertaken looking to the production of varities resistant to wilt and to the control of anthracnose. These two diseases cause large losses annually.

The next subdivision is truck-crop diseases. As I said, the cotton-disease work is estimated at $21,520, and the estimate for truck-crop disease work makes up the balance of the total of $137,550.

Of the truck-crop diseases the work on potato late blight, which is one of the most seriously troublesome diseases of the northeastern States, is estimated at $17,500. This disease in past years has destroyed potatoes at the rate of 3,000,000 bushels a day during certain periods.

The next truck-crop diseases are seed-borne potato diseases, including mosaic, leaf roll, blackleg, and scab. In the main this work is in the North, where much of the supply of seed potatoes for the South

and the Middle States territory is grown. The estimate for these diseases is $10,710.

The estimate for work in sweet potato diseases is $16,680. This, of course, is again a southern product. It is estimated that the department work on these diseases last year resulted in saving $100,000 in two southern counties alone.

The next is bean diseases, the chief need for which is in the Lake region, in New York and Michigan in particular, where the supply of beans is chiefly grown, and the estimate for that is $11,000.

Tomato wilt is particularly troublesome in the canning districts where the tomato is an important food crop, and the estimate for that is $11,500. Tomato wilt causes losses estimated to aggregate approximately 200,000 tons of tomatoes annually, and tomato leaf spot is responsible for the loss of at least 500,000 tons. The losses from these diseases can be prevented through the adoption of proper control measures.

The nematode diseases that attack the cotton and forage crops, chiefly in the South, as well as truck crops, are estimated to require $11,720.

Item 7 is southern garden diseases, such as tomato wilt, cabbage yellows, root knot, etc., which are especially discouraging to home gardeners, and frequently make the summer cultivation of these vegetables impossible. This is an extension feature through which an effort is being made to encourage the maintenance of the home-garden food supply in the Southern States. Last year there was a good deal of discouragement in some places because of the inability of the gardeners to control diseases which, under commercial conditions, with commercial equipment and experience and help, are controllable. This is an effort to work out practical applications of the large-scale commercial control methods to the small holdings.

The eighth item is a feature which has developed very great importance during the past year. It is for pathological investigations of vegetables during the processes of marketing, looking to the determination of the diseases which cause some of the most serious losses, and the institution of control methods at the source of production; also cooperation with the War Department by giving advice relative to diseases affecting perishable vegetables purchased for the Army. It provides for the identification of the diseases that are found upon the vegetables, and to carry back to the places of production methods of control.

It is very closely associated with the Bureau of Markets inspection of perishables as they arrive at the markets. Much of the deterioration in shipments and in storage is traceable to specific diseases of the crop that ought to be controlled and must be controlled in the field. There has been a very great lack of knowledge in the trade and on the part of the transportation agents which it is sought to cure through this work.

The CHAIRMAN. Let me see if I understand it. You go to the point of shipment, make an inspection, and find that there is a disease, and you trace the disease back to the point of production, and there you institute your control measures?

Dr. TAYLOR. We start one step farther back, at the point to which the shipment is consigned. We get our first line on it usually where the Bureau of Markets inspectors report arrivals in bad order, that

seem to be in some way traceable to other things than bad handling, or the obvious causes of bad order on arrival. From there we trace it back to the point of shipment. Of course in many cases this develops simultaneous activities, the man in the receiving market reporting by telegraph and the man nearest by in the field taking up at the point of shipment as it is brought in there.

The CHAIRMAN. In your first item you estimate for an appropriation of $21,520 to control cotton diseases, and especially for the introduction of varieties resistant to wilt and to the control of anthracnose. What do you do?

Dr. TAYLOR. This is specialized instruction work through the county agents. It is really the instruction of county agents in these features.

The CHAIRMAN. In other words, you know how to control anthracnose.

Dr. TAYLOR. To an extent.

The CHAIRMAN. You carry that information to your county agent, and he in turn carries it to the farmer?

Dr. TAYLOR. Yes.

The CHAIRMAN. Anthracnose is a very destructive disease?

Dr. TAYLOR. Yes. This is specialized instruction of county agents with respect to the control of the disease in their territory.

The CHAIRMAN. Take the item for potato late blight, which you say sometimes causes losses of potatoes at the rate of 3,000,000 bushels per day. What do you do there?

Dr. TAYLOR. Let me say, Mr. Chairman, that the last statement applies through all of these items usbstantially down to item No. 8.

The CHAIRMAN. There you do some investigation work?

Dr. TAYLOR. There we have to do some investigational work, and there it is rapidly becoming the instruction of the market inspectors with respect to these diseases which cause the deterioration.

The CHAIRMAN. I take it that under your regular fund you are still studying the subject of anthracnose and all these various things, and what you are proposing to do under this appropriation is to carry the information you have already discovered out to the people and make it available in a practical way just as far as you can?

Dr. TAYLOR. Yes.

Mr. ANDERSON. Is there anything carried for this same work in the regular appropriation bill?

Dr. TAYLOR. No, sir. The regular appropriation bill provides for the investigational work.

The CHAIRMAN. The next item is "Farm storage of sweet potatoes." Your allotment in 1918 is $15,000, and the estimate of this bill is $30,000, or just double the 1918 allotment.

Dr. TAYLOR. The funds assigned to this project for the present year became available so late that it was impossible to accomplish all the work contemplated. Practically all the money alloted for the purpose was expended during September, October, November, and December in a campaign to induce farmers in the southern States to build storage houses for the proper handing and curing of their potatoes. It is estimated that the houses built and remodeled during the autumn of 1917, as a result of the department's recommendations, will hold at least 1,000,000 bushels of sweet potatoes and that the value of the sweet potatoes stored in the proper type of

house is increased at least 25 cents per bushel over that of those stored in pits. On an average at least 25 per cent of the sweet potatoes stored in pits are lost through decay, as against a loss in storage houses of less than 5 per cent. It is believed that the results secured so far fully justify the continuation and enlargement of the work next year.

Last year an early freeze occurred which reduced the market supply greatly in Mississippi, Alabama, and the territory westward. But, as you will note from what I have already said, it was estimated thaat 1,000,000 bushels capacity of suitable sweet potato storage was provided through last season's activities.

The activity was very timely in that a considerable proportion of our sweet potato seed stock for this year's plantings was kept in these houses, a much larger than normal proportion of the pitted and otherwise stored sweet potatoes having frozen in the pit so that they were spoiled.

Mr. ANDERSON. Departmental activities are not responsible for the poor quality of the sweet potatoes this year?

Dr. TAYLOR. The department would not like to be held responsible for the freezes that caused much of the injury.

The CHAIRMAN. Have you developed some type of housing for sweet potatoes?

Dr. TAYLOR. Yes; a farm type as well as other types. We have plans and specifications and tentative bills of material required to construct those houses that are furnished to growers. This is done practically entirely through the country agents in the territory where a sweet potato storage drive is put on. They carry small model houses which help the farmers to see more clearly than a drawing just what the thing looks like.

The CHAIRMAN. What is the theory of the houses, plenty of good ventilation?

Dr. TAYLOR. First, to provide for heating the stored crop. It must be cured at the start. Then, to control ventilation and, of course, to have sufficient insulation to protect the product against freezing during the winter.

The CHAIRMAN. The next item, on page 14, is "Location of Irish-potato seed stocks." The allotment for 1918 is $10,000, and the estimate in this bill, for 1919, is $30,000, which is an increase of $20,000.

Dr. TAYLOR. Under this project the work is to locate during the growing season, through inspection of the fields, especially just before, and during, and after blooming time, stocks of potatoes that are both true to variety and free from disease, that they can be listed as suitable for seed.

The work last year on that, of course, had to be done at the digging time, the season being too far advanced when the fund became available.

But a total of more than 600,000 bushels in nine States was listed as a result of this activity, a large proportion of which—I do not know exactly what proportion—has moved as seed. We are getting very good reports now from Florida plantings made with this seed that was inspected and approved last fall in the Northern States.

The department, of course, does not certify such seed. It has no authority to do that. In certain of the States that have laws that

do permit the State's people to certify as to its purity and its disease-free character, they do certify that seed.

This project has for its object a general survey of the United States for the purpose of locating stocks of disease-free and varietal-pure seed potatoes and the determination of the suitability of certain stocks and varieties for seed purposes in the various potato-producing areas. The work is carried on by potato specialists, cooperating with specialists in plant diseases. Considerable quantities of seed potatoes have been located and inspected during the current year in Maine, Vermont, New Hampshire, Massachusetts, Indiana, Wisconsin, Minnesota, and Colorado. The need for locating as large a quantity of good seed potatoes as possible in the autumn of 1918 for use the following year is very urgent, whether the war continues or not. No other factor is of more vital importance to the potato industry than that of good seed. The present funds are too limited to permit the extension of this campaign in an adequate way. It is hoped to continue the work in the States already covered and to extend it to other areas in the North and West. The plans for next year contemplate a campaign in 19 States.

STATEMENT OF DR. KARL F. KELLERMAN, ASSOCIATE CHIEF OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. The next item, on page 14, is "Plant-disease survey." The allotment for 1918 is $18,500, and you are asking in this estimate for $23,000, which is an increase of $4,500. Will you please explain that item?

Dr. TAYLOR. I will ask Dr. Kellerman to discuss the item for plant-disease survey, as he has given particular attention to that.

Dr. KELLERMAN. Mr. Chairman, I have no extensive statement to make in regard to this particular item. It is a very necessary item, but the matter has been pretty well covered in earlier discussion.

It is highly essential that the department have available definite information relative to the occurrence and severity of the more important plant diseases as an aid in the control of serious epidemics, especially of diseases of grain and truck crops. It is especially important to determine the range of a new destructive disease of corn recently introduced from the Orient, the regions where potatoes and beans are seriously injured by plant diseases and where control work must be undertaken, and similar factors necessary for the proper development of the campaign against the smut and rust diseases of wheat, as well as diseases of other crop plants.

The $10,000 allotted to the plant-disease survey from regular funds has been sufficient only to enable the department to maintain in Washington and the States a skeleton organization for gathering data by correspondence but does not permit of active war emergency work. During the current fiscal year an allotment of $15,000 under the food production act has made it possible to extend the work somewhat in the field. The State plant pathologists in nearly every State have been made collaborators of the department and, with them as local leaders, cooperative relations rapidly are being established with a large body of pathological workers, thus making it possible to collect a large volume of information on diseases of food crops of

great value in emergency disease-control operations and fostering a spirit of cooperation among pathologists, which is of great importance at this time. This work is also conducted in close cooperation with the various pathological offices of the Bureau of Plant Industry.

The value of the plant-disease survey as a war emergency agency may be summarized under two heads: (*a*) General watch service regarding diseases of important food crops in the various States, and (*b*) special surveys on particular diseases of crops.

(*a*) General watch service: Both Federal and State pathologists have found the services rendered by the plant-disease survey during the past season to be very valuable and have emphasized the importance of extending it next year. It is hoped to keep in sufficiently close touch with the general disease situation in each State so that warning may be given of the more unusual or important developments of diseases of the principal crops, thus clarifying the disease situation in each State and affording a sound basis for the emergency work undertaken by State and Federal pathologists. In order to develop this work in a thorough way it will be necessary to enlarge the present staff of correspondents so as to tap all available sources of information. It is estimated that $3,000, to be expended largely for travel expenses, will be sufficient to develop this watch service on an efficient war-time basis.

(*b*) Special surveys: The various pathological offices of the Bureau of Plant Industry have requested assistance from the plant-disease survey forces either (1) by gathering disease data bearing on their control operations, especially in those regions which their own field men can not cover wihout taking them away from their special duties in extension and control work, or (2) by gathering data on diseases of important crops which merit immediate attention as war emergency measures but which can not profitably be undertaken as definite projects without preliminary field study. As illustrations of special surveys urgently needed at the present time may be mentioned the leaf rusts of wheat and other cereals, root and stalk diseases of corn, ergot of rye and other grains and grasses, late blight of potato, sweet potato and onion diseases, rust of beans and of asparagus, soy-bean diseases, sugar-beet nematode troubles, and sugar-cane diseases.

It is found necessary to have some organized branch of the department continually accumulating records, the statistical information that we do find necessary in planning our campaigns for controlling those epidemics of plant diseases that become serious. Through this agency we are beginning to find it possible to catch the epidemics in comparatively early stages, instead of waiting until they assume destructive proportions, when they become very difficult to handle.

We are gradually accumulating a fund of information that is altogether somewhat terrifying, as to the magnitude of the losses that occur each year from plant diseases. That information we are not distributing widely at the present time. We are calling it to the attention of the investigators—the men who are devoting their special attention to the controlling of plant diseases—to stimulate their efforts and to make possible a great concerted attack on the more serious plant diseases.

The CHAIRMAN. Do you work in cooperation with the extension forces, and do you have field agents going from place to place?

Dr. KELLERMAN. We have a few field agents. Our cooperation is mostly with the specialists of the different agricultural colleges.

The CHAIRMAN. I notice you provide for five specialists at $150 per month, 10 at $125 per month, 6 at $100 per month, and 4 more at salaries ranging from $1,100 per year up to $1,800 per year. Are those your field men?

Dr. KELLERMAN. Those are the field men that we have to have to keep satisfactory contact with the States' men.

The CHAIRMAN. And to provide for your special service; is that true?

Dr. KELLERMAN. Yes, sir.

STATEMENT OF DR. WILLIAM A. TAYLOR, CHIEF OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE—Continued.

The CHAIRMAN. The next item is "Castor-bean production and utilization." The allotment for 1918 is $4,738, and the estimate in this bill, which you are asking for is $20,000, making an increase of $15,262.

Dr. TAYLOR. Mr. Chairman, if you will permit the return for a moment to page 14, the item for the "Location of Irish-potato seed stocks," there is one feature which has developed since the estimates were prepared, with respect to Irish potatoes, and that is the importance of providing in the Plains Region in particular for a series of field demonstrations of good seed potatoes. That work could be conducted in connection with our existing field stations which are devoted to cereal and other work, if we have sufficient funds available to put good men on to supervise the general activity and to carry the expense of the plots at the several places.

It is a feature which the potato-growers' association has strongly urged to be undertaken, and it was not covered in these estimates. It would cost approximately $10,000 to carry that work on for the year.

Mr. HARRISON. The Secretary approved this matter, Mr. Chairman, and suggested to Dr. Taylor that he discuss it with the committee.

The CHAIRMAN. You will insert a statement in the record in regard to that?

Dr. TAYLOR. Yes. It is a feature which probably should be carried by the regular bill, but it has come up since the estimates were prepared.

(The statement referred to follows:)

ESTIMATE OF AN APPROPRIATION FOR CONDUCTING FIELD TESTS AND DEMONSTRATIONS OF THE PRODUCTION OF IMPROVED VARIETIES OF POTATOES FOR SEED PURPOSES.

It is believed desirable that an increase of $10,000 be made in the item for the prevention, control, and eradication of insects and plant diseases injurious to agriculture, and the conservation and utilization of plant products, making a total of $921,300, for the purpose of inaugurating demonstrations of the much larger yields and better quality of Irish potatoes that may be produced by the

use of selected high-producing and disease-free strains of potatoes, and for aiding the industry to produce suitable supplies of the superior varieties.

The relatively low yields of potatoes secured by growers in this country can be materially raised by an improvement in the character of the seed supply. Up to the present time no effort which has been far-reaching enough to affect the yield or quality of the general crop of potatoes of the country has been carried on by the growers of and dealers in seed potatoes.

A general improvement in methods of growing and handling seed potatoes is needed, an improvement which will put this important seed item on as good or a better basis than that of the standard vegetable seeds handled by seedsmen. To do this, funds and facilities not possessed by the average potato grower must be available, and, in addition, training, skill, and authority to conduct work on a broader scale than that now possessed by the forces at present engaged in the work is essential.

It is believed that the knowledge possessed by department workers of varieties, their adaptability to certain uses and regions, places them in a position to materially serve the industry, if facilities for extending the work can be provided which will make it possible to increase the progeny of selected productive strains, so they can be made available to experiment-station workers, seedsmen, and growers.

As the seed supply used for crop production in certain regions is produced in remote areas, the work must be done in the regions best adapted to the production of vigorous, productive seed. In general, the seed-producing region should be as near the field of production as practicable, on account of the bulk and weight of the seed. It will be necessary, therefore, to establish potato-seed supply and demonstration stations on a regional basis in order to best serve the needs of the industry, although fundamental breeding and selection work with standard varieties, as well as with seedlings, can be carried on as at present at the three or four primary bases. The work of increasing the seed stocks resulting from the work at the breeding and selection bases should be provided for wherever demonstration fields showing the benefit from the use of good seed are established.

It is proposed to establish demonstration plots with the State experiment stations and upon the experiment farms maintained by the bureau, especially in the Great Plains area. Such plots presumably would be located in each of the following States: Maine, New York, Wisconsin, Minnesota, North and South Dakota, Nebraska, Wyoming, Colorado, Idaho, Montana, Washington, Oregon, and California.

The employment of three additional potato experts would be necessary, at salaries approximating $2,000 each, with $2,000 for travel and miscellaneous expenses, and $2,000 for labor at the different stations.

The CHAIRMAN. Now, will you explain the item on page 16 for "Castor-bean production and utilization"?

Dr. TAYLOR. The oil of the castor bean has been found to be particularly desirable in the lubrication of airplane motors. It happens to be one of the few oils not soluble in gasoline and is affected but little by changes in temperature. It is therefore particularly useful in these motors. To meet the war needs in this direction the War Department has found it necessary to contract for the growing of about 100,000 acres of castor beans, and the assistance of this department has been requested in supervising the agricultural work incidental to the production of the crop.

While formerly an important crop in certain sections of Oklahoma, Kansas, Missouri, and Illinois, the culture of castor beans has been practically abandoned in this country in recent years. The large planting required will have to be undertaken by growers who have little or no knowledge of the special features of the cultivation and handling of the crop. The work will be distributed over a wide area in the States of Virginia, North Carolina, Georgia, Florida, Tennessee, Alabama, Mississippi, Texas, and California. In order to give effective assistance, this large field should be divided into not

less than five districts, in each of which the services of a skilled agronomist should be provided to follow up closely the plantings of castor beans which are being made under Government contracts and supply the necessary advice and instructions to farmers and farm demonstrators, contractors, county agents, and others concerned.

It is planned (1) to insure, so far as possible, the proper handling of the crop in order to give the highest degree of certainty of obtaining the needed product, and (2) to acquire practical, detailed data regarding the best varieties to plant, the most suitable regions for planting, and the most desirable methods of handling the crop, in order to protect the interests of the Government should it become necessary to produce another crop of castor beans.

The castor-bean project is the outgrowth of the need of the aviation service for a greatly enlarged supply of castor oil for lubrication. It developed last fall and during the early winter that very much larger supplies would be required than were in sight and available in the world, and the contracting for acreage in this country by the Signal Corps was authorized. The contracting with the growers at definite prices per bushel has been accomplished.

The department, through the Bureau of Plant Industry, has been asked to cooperate in this work through handling the agricultural and production features. It was necessary to begin the work during the winter, as the crop is now mostly planted and growing in some 10 States to the extent of 94,000 acres already contracted for, and we estimate that $20,000 will be required to carry this activity through the fiscal year.

The situation is a very unusual one, in that where we formerly grew most of the castor beans that were used in this country, we had ceased practically to grow any at all, relying on importations from India and China, from which countries they were delivered cheaply and in sufficient quantities for all our requirements. The result is that the country has to attempt, almost overnight, to put in 100,000 acres of a crop regarding which there is little experience and not very much exact record, although we do know that it persisted as a crop in southern Illinois, Kansas, and Oklahoma for a good many years, up to some 25 or 30 years ago.

Mr. Anderson. Do they not grow the castor bean out in California?

Dr. Taylor. Not commercially. But there are 10,000 acres contracted for in California this year.

Mr. Anderson. What are castor beans worth per bushel?

Dr. Taylor. The present commercial price is above $5. At the time when it was a crop in our lower Middle West the prevailing price was around $1 and $1.25. That, however, was in the days of less than dollar wheat and in the days of less than 30-cent corn.

Mr. Anderson. What is the production per acre?

Dr. Taylor. That varies very greatly from 3 or 4 bushels to 20 or 30 bushels. The best guesses that can be made now would indicate a range of from 15 to 25 bushels on such lands as are being devoted to the crop.

Mr. Anderson. How long does it take to raise a crop?

Dr. Taylor. The crop is planted about with corn and begins to mature seeds in two and a half or three months following. It then continues, unless killed by frost, indefinitely. It is a perennial in

the Tropics, although practically throughout the territory of continental United States, except in extreme southern Florida, it will of necessity be an annual crop.

The Signal Corps has contracted for acreage, in the main, in rather large blocks, and the contractors, in turn, have subcontracted with individual farmers in acreage down even to fields as small as single acres. Seed is furnished, it having been found necessary to bring a special lot of seed from India to provide for the emergency. That seed is furnished by the Signal Corps.

Mr. WASON. Would you call it a 90-day crop?

Dr. TAYLOR. No. It begins to mature in 90 days. The rapidity with which the crop will come forward will depend a good deal on the intensity of the climate. It is not a crop that matures as corn does, at one time, but it keeps blossoming, setting, and ripening, so that it is an all-the-year crop, until killed by frost.

Mr. WASON. Then you must be able to get a crop in about 120 days?

Dr. TAYLOR. Yes; a sufficient crop for that yield per acre.

Mr. HAUGEN. How is it harvested? Do you pick off the ripe ones?

Dr. TAYLOR. In cases where definite termination comes, as in case of frost, by the cutting of the bunches and the thrashing out of the seed. In territory where the frost is delayed, there has to be the individual picking of the burrs containing the seed, as you pick a crop of lemons or the picking up of the seed where it scatters on the ground.

Mr. HAUGEN. The harvesting must be slow; it is hand work?

Dr. TAYLOR. Yes; there is a good deal of hand work involved in the harvesting.

The CHAIRMAN. The next item is, "Maintenance of field-bean seed supply." The allotment in 1918 is $7,500, and you are asking in this bill for $10,000, which is an increase of $2,500.

Dr. TAYLOR. This project is very similar to the seed-potato project, and is contemplated for the Lake region almost entirely—New York, Michigan, and that territory where disease-free seed beans are important. It is not possible to go west to the dry country to get beans to plant in this bean belt because of the lack of adaptability of the western varieties to the climatic conditions farther east.

Investigation has shown that, in order to insure the best results in the production of field beans, it is necessary (1) to use seed of local harvest and (2) to be absolutely sure that the seed is viable. It is not safe to use foreign beans for seed. For example, California beans of the same commercial classification do not give good results when used for seed in New York or Michigan. Hence the necessity of conserving for each important growing region seed of its own production which is clean, viable, and free from disease. To insure a stand of beans on the acreage to be planted next year, unusual care in the choice of seed will be necessary. It is highly desirable, therefore, that the department should conduct an active campaign in cooperation with the State forces to locate adequate and suitable seed for the coming season's planting.

The CHAIRMAN. The next item, on page 17, is "Field supervision of war-garden work." The allotment for 1918 is $2,500, and the estimate for 1919 is $7,500, or an increase of $5,000.

Dr. TAYLOR. There was a large increase, estimated at from 200 to 300 per cent, in the number of home gardens planted last year. An

active campaign is now under way to stimulate the planting of home gardens during the present season, and the demand for assistance in this direction is very great. The work of the department along this line is primarily under the direction of the States Relations Service, cooperating with the Bureau of Plant Industry. It is proposed to employ additional garden specialists in the Bureau of Plant Industry to assist the extension forces in the planning of the garden work and to give advice regarding the handling of crops and the varieties that are most satisfactory for small gardeners.

We need some people to properly carry on the plant industry activities in the field. This work consists in the planning and preparation of material for printing, and the instruction of the county agents who actually carry on this special work.

STATEMENT OF DR. KARL F. KELLERMAN, ASSOCIATE CHIEF OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE—Continued.

The CHAIRMAN. The next item is "Production of cereals and grain sorghums." The 1918 allotment was $5,000, and the estimate in this bill is $53,250, which is an increase of $48,250. That is a large increase, Doctor.

Dr. TAYLOR. There is a large item here. It is pretty nearly all new, and, inasmuch as Dr. Kellerman has given special attention to this work, I will ask him to discuss it.

Dr. KELLERMAN. Mr. Chairman, there are two lines of activity that we would undertake here. One is the better appreciation of the utilization of the best varieties of sorghums for the different regions, and the stimulation of interest in the use of the best varieties, and the location of the fields that were producing the best kind of seed. The latter activity is the one which is undoubtedly the more costly and the more important.

During the present year, because of the scarcity of the seed supply, much of the good work of earlier years has been largely nullified by the planting of varieties—this applies probably more to wheat than to sorghum; but in both cases it applies to a rather serious extent—the planting of varieties that are not particularly adapted to the region, and which are not specifically productive varieties.

It is considered to be very important in the stimulating of these crops that we devote much more attention than we have been doing in the past, and because of the disorganized condition which has resulted from the scant seed supply we believe we should devote unusual attention to the location of fields that have the superior varieties growing in them, and make these particular fields available for seed purposes rather than for general market purposes. That, I think, is a summary of the more important activities under this item.

We would need some special men, and we would have to keep them in the field, beginning in the near future—that is, before the 1st of July. We would plan to have our men in the field, and to continue there throughout the season until the early fall.

It is proposed to conduct an active field campaign with a view to securing the adoption of the best methods of producing cereals and grain sorghums. Several specialists should be assigned to the

spring-wheat areas, especially in those States which have been asked to greatly extend their acreages, and to those regions where there has been a large increase in rye production during the past few years. Special campaigns also should be conducted to secure the more general adoption of the best methods in the production of flax, buckwheat, barley, and grain sorghums. In all cases the experts and assistants to be appointed will work as special advisers to the county agents in selecting the varieties of these crops best suited to the different regions and in securing the most economical use of labor and the adoption of the best methods of planting, handling, and storing the crops. If this work is actively prosecuted, it is believed that a very material increase in production during the coming season can be accomplished.

Mr. ANDERSON. Have you done any publicity work in the northern half of the country?

Dr. KELLERMAN. Very little.

Mr. ANDERSON. I have had a great many inquiries recently about sorghums.

Dr. TAYLOR. Have you reference to sweet sorghums?

Mr. ANDERSON. Yes.

Dr. TAYLOR. That feature is the outgrowth of the general recommendation, possibly, of the department that in view of the shortage of sugar and other sweets that wherever it is practicable sorghum be brought back to its status of the earlier years, as the name Minnesota amber indicates the former status of sorghum in your State. There is very greatly renewed interest in sweet sorghum planting generally throughout the country, particularly through the corn belt, which the department is encouraging.

Mr. ANDERSON. I have had a great many inquiries, and I was wondering if it was the result of some propaganda the department has been putting out.

Dr. TAYLOR. A recommendation to that effect was included in the crop program of the department and in certain of the States the extension people have seized upon it as a good, practical thing to push.

STATEMENT OF DR. WILLIAM A. TAYLOR, CHIEF OF THE BUREAU OF PLANT INDUSTRY, UNITED STATES DEPARTMENT OF AGRICULTURE—Continued.

The CHAIRMAN. The next item is "Sugar-beet nematode work." Your allotment for 1918 was $2,000, and the estimate in this bill is $10,000, making an increase of $8,000.

Dr. TAYLOR. This is specifically applicable to the commercial sugar-beet producing territory of the West.

The sugar-beet nematode occurs in destructive numbers in California, Utah, Idaho, and Colorado, where it has been definitely located. It undoubtedly is responsible for serious losses in other localities. The losses in California from this pest, according to the best figures obtainable, are approximately $300,000 annually. A survey of Utah and Idaho, just completed, shows that the sugar-beet nematode occurs in no less than 10 sugar-beet areas in those States. A conservative estimate of losses to growers in these areas, based on the prevailing price of beets, amounted in 1917 to over $300,000; the loss to sugar companies, based upon yield of sugar per acre and price of

sugar, amounted to nearly $900,000; making a total loss to the growers and sugar companies in Utah and Idaho of approximately $1,200,000. Aside from the financial loss involved, the decreased output of sugar in Utah and Idaho from this cause is estimated at 40,000 tons. These losses may be expected to increase steadily from year to year unless active steps are taken to control this pest.

In many of the areas in which the nematode is found the infestation is slight at present, and if effective steps are taken at once the pest undoubtedly can be held in check, at least to the extent of permitting the growing of sugar beets with profit in such regions. It is proposed to make a thorough survey of the sugar-beet sections to locate the areas which are or may be infested, so that growers may adjust their operations accordingly, and also to give advice regarding control measures and the rotations which should be practiced on badly infested lands.

The reduction in the yield per acre is especially unfortunate at this time. Certain facts are known; they are not wholly proved, but they are regarded as certain, with respect to crop rotation control, so far as the sugar-beet nematode is concerned which it is believed should be applied as vigorously as it can possibly be done with respect to the planting of 1919. Of course this year's crop is now growing in many sections.

The CHAIRMAN. The effect of the nematode on the sugar beet is the same as its effect on other plants?

Dr. TAYLOR. Substantially so, but it is a different species. The nematode has been some trouble in Germany for a good many years, but it is of relatively recent establishment in this country, so far as we know.

The CHAIRMAN. Your remedy here is rotation, largely?

Dr. TAYLOR. So far that is the only thing in sight.

Mr. HARRISON. The allotment of $2,000 was made only about a month ago, so that the work will cover only three months of the present fiscal year. The increase is only apparent, as it is necessary to make provision for the continuation of the work throughout the next fiscal year.

The CHAIRMAN. I think Mr. Harrison had better make a general statement in regard to the making of these allotments within the last two or three months.

Mr. HARRISON. Mr. Chairman, many of these allotments have been made within the last two or three months, so that, while there is an apparent large increase in some of them, the real increase is not large in most cases because the amounts requested have in view the conduct of the work throughout an entire fiscal year. The various appropriations under the food-production act are kept under the Secretary's direction, and allotments are made to the bureaus from time to time when it is shown that the funds can be expended to advantage. A certain portion of each appropriation is also reserved to meet emergency situations, such as some of these items represented, which did not appear in the fall but came along later in the spring, so that they cover only a portion of the year, whereas the fund suggested for next year will cover the entire fiscal year.

Dr. TAYLOR. This particular feature was not contemplated when the estimates were put in, I know. It has developed just recently, during the winter.

The CHAIRMAN. Your estimate for the food-production bill was $20,000,000 last year, and that was cut down some.

Mr. HARRISON. It was finally cut down to $11,346,400.

Mr. HAUGEN. How much money have you spent on sugar beets?

Mr. HARRISON. The regular appropriation is between $40,000 and $45,000, but that is for investigational work largely. The estimate under discussion refers to funds required for dealing with the nematode in sugar-beet areas, which has caused large losses.

Mr. HAUGEN. Are you contemplating any new work on that line, beyond what is indicated here?

Mr. HARRISON. No, sir.

Mr. HAUGEN. Have you sufficient funds for the work to carry it on successfully?

Dr. TAYLOR. The total sugar-plant appropriation carried in the regular appropriation bill is $64,115. That includes $10,000 specifically for sugar-beet seed development, which is an important item at this time, and $12,500 for sorghum.

Mr. HAUGEN. Do you contemplate increasing the scope of the work this year?

Dr. TAYLOR. No; that is, not except on the sweet sorghum. We do not carry in this estimate an item for the control of a new sugar-cane disease in Porto Rico. There is no increase for the sugar beet.

Mr. HAUGEN. How much is being expended for that?

Dr. TAYLOR. Roughly, $40,000 for the sugar-beet work.

Mr. HAUGEN. Do you regard that as sufficient?

Dr. TAYLOR. We feel it is fairly adequate as the situation now stands.

Mr. WASON. Mr. Chairman, do you not think it would be better to have Mr. Harrison put in the record those items to which apportionments have been recently made?

The CHAIRMAN. I think that would be a good idea. Some of the projects show very large increases.

The next item is for "Pathological inspection of fruits during processes of marketing." The allotment for 1918 is $4,800, and the estimate for 1918 is $18,000, making an increase of $13,200.

Dr. TAYLOR. This is for fruits, and is for work similar to the item discussed a few moments ago for vegetables. It is a technical disease inspection of fruits in commercial movement, in cooperation with the Bureau of Markets. The Bureau of Markets has found it very necessary to have it done, as their inspection work has developed. It reflects right back into the fruit-production features just as the vegetable-inspection work does.

The object of this work is to carry on the necessary plant pathological work in connection with the inspection service of the Bureau of Markets, with a view to determine the pathological conditions of fruits at the shipping plants, locate and prevent the causes of decay, discourage the shipment of fruit which is likely to spoil in transit or on the market, and to advise as to methods of handling on the market and in storage in order to prevent losses from pathological causes. The inspection will include strawberries, cranberries, grapes, peaches, plums, cherries, apples, and citrus and other fruits.

This work is essential to the effective administration of the food-products inspection law. It is highly technical in character and en-

tirely different from, but supplements in a very definite way, the work of the Bureau of Markets under this law.

The CHAIRMAN. The next item is "Control of a new sugar-cane disease." You are asking for $20,000 for this item.

Dr. TAYLOR. This is a feature which, as it stands, is substantially investigational. This is a new sugar-cane disease on the island of Porto Rico which has become a menace to the crop there, which has an actual annual output value at present in the neighborhood of $50,000,000. The Porto Rico station has been at work upon that for something like two years past and felt until recently that they might be able to handle it. The station came through after the hearings on our regular estimates were completed, with a very urgent appeal from the pathological workers and the insular authorities for help in that work, and the item was added as one of the last in the Plant Industry estimate.

The cause of the disease is not known. It has been under observation for about four years. Emergency investigational work is required. It came through too late to be reached in the regular bill.

So far as the department knows, it has not yet appeared in any other part of the world. The latest information at hand is that the disease is continuing to spread and that there are localities in the western end of the island where the growing of cane has been entirely abandoned. In four years the disease has spread from a few patches here and there until it now covers about one-fourth of the island and threatens to wipe out the sugar-cane industry of the island.

If the disease remains unchecked there is danger that it will sooner or later spread to Cuba and possibly to the United States. The cane-sugar production of Porto Rico has reached a total of 400,000 tons annually, which at the present price of raw sugar has a value of more than $50,000,000. Specialists from this department should be assigned to cooperate with the pathologist of the insular experiment station in working out and securing the adoption of practical methods of control.

The possibility of the occurrence of this disease in Florida at the present time also should be investigated.

The CHAIRMAN. The next item is "Production of rice," for which you ask $5,000.

Dr. TAYLOR. Mr. Chairman, this is a small project intended in part to stimulate the production of rice in Porto Rico, where there is a heavy importation demand under existing conditions, and where the preliminary examination by our specialist satisfies him that there is a possibility of quick enlargement of production for home use.

It is desired also to give some attention to the production of the home supply, not the commercial supply, in such portions of the Southeastern States where the normal rainfall is heavy during the summer months, and there is an indication that some home production of rice would be worth while. We want to feel out that situation in a constructive way.

Results of a recent general survey of Porto Rico by the Bureau of Plant Industry indicate that this island, which now buys on an average of $4,500,000 worth of rice from the United States each year, has a sufficient area suited to this crop to produce at least 50 per cent of its annual rice requirements. This department can render material service in developing rice production on the island by cultural,

irrigation, and varietal tests, in cooperation with the insular experiment station. Before recommendations can be made as to commercial rice culture, however, it will be necessary to have such data as may be obtained from the proposed experiments. This country does not grow enough rice for its own use.

In certain sections of Georgia, South Carolina, Alabama, and Florida, where the normal rainfall is heavy during the summer months, it is believed that much good might be accomplished by encouraging the production of rice for local and home use. This work does not contemplate any general extension of the rice-producing area, but the demand for rice is increasing, and there are small areas on many farms which could be advantageously utilized for rice production.

The CHAIRMAN. Is there any hope of rebuilding the lost rice plantations in South Carolina and Georgia?

Dr. TAYLOR. I do not think so. The economics are against it under present conditions.

The CHAIRMAN. Is there anything further you desire to submit?

Dr. TAYLOR. The only other project in which the Bureau of Plant Industry appears is on page 30, "Fruit and vegetable utilization," in which the Bureau of Plant Industry has a project and the Bureau of Chemistry has a project, the Bureau of Plant Industry handling the work that has to do specifically with the methods of drying in the homes and on the farms, as distinguished from the commercial enterprise feature, which is handled by the Bureau of Chemistry.

(See also statement by Dr. C. L. Alsberg relative to features of this project conducted by the Bureau of Chemistry.)

The CHAIRMAN. You handle only the home-drying proposition?

Dr. TAYLOR. Home and farm drying as distinguished from the commercial plant, which the Bureau of Chemistry handles, the work that is contemplated being a continuance of that which is now under way, which we feel has some very promising possibilities. We are working on potatoes from the farm-drying standpoint. We have some dryers just starting into operation at our Arlington farm that we hope a little later will prove practical to recommend in the potato-growing country.

The CHAIRMAN. Is this investigational work largely new?

Dr. TAYLOR. This is in the half-way stage; it is experimental demonstration. The theory has been worked out; it is now a question of best methods of application.

The CHAIRMAN. Have you devised some machinery by which you can do this?

Dr. TAYLOR. Yes. We are not quite at the point where we can prove each thing we desire to recommend.

Mr. HARRISON. It is a question of making a demonstration and at the same time observing the results.

Dr. TAYLOR. Yes; it is in the transition stage between investigation and demonstration.

(Thereupon, at 5 o'clock p. m., the committee adjourned, to meet again Thursday, April 25, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Thursday, April 25, 1918.

The committee met at 10.30 o'clock a. m., Hon. Gordon Lee (acting chairman) presiding.

(The first item discussed was "Extension work in beekeeping," page 56 of the printed estimates. See statement of Dr. E. F. Phillips, elsewhere in these hearings.)

III.

FOR THE PREVENTION, CONTROL, AND ERADICATION OF INSECTS AND PLANT DISEASES INJURIOUS TO AGRICULTURE, AND THE CONSERVATION AND UTILIZATION OF PLANT PRODUCTS, $911,300—Continued.

BUREAU OF ENTOMOLOGY.

STATEMENT OF MR. C. L. MARLATT, ASSISTANT CHIEF OF THE BUREAU OF ENTOMOLOGY, UNITED STATES DEPARTMENT OF AGRICULTURE.

Mr. MARLATT. Mr. Chairman, the work of the Bureau of Entomology is divided into a number of sections. These cover insects that attack cereal and forage products, stored products, truck crops, deciduous fruits, citrus fruits, and live stock. There are also some special subjects, such as rice and sugar-cane insects. Would you prefer to have a general statement or take up these subjects in the order they are given in the estimates?

Mr. LEE. I think it would be preferable to take them up in the order in which they are given in the estimates, unless some member of the committee prefers it the other way.

Mr. MARLATT. Taking up the first section, the work of the bureau in relation to cereal and forage insects is to safeguard against loss and thus increase production. It is not necessary before this committee to explain the loss occasioned by injurious insects to these various crops. A great deal of this loss is preventable, and the work of the department for many years has been looking to the prevention of this loss. The emergency-extension funds have been used to bring more intimately to the knowledge of the farmer the means of preventing these losses. The work consists in getting competent men and using them as educational and demonstrational agents through the States Relations Service and the extension service of the different States. These men have not as a rule been definitely assigned to particular States, but are available for assignment wherever the emergency arises. In general, a group of men will be assigned to a special subject. For example, in this cereal and forage insect work we have the men assigned to the States where the cereal and forage crops are the important cultures, namely, the Middle and Western States. Much of this work is being done west of the Mississippi. Through these experts, farmers are advised of the means of preventing losses occasioned by the Hessian fly, chinch bug, corn-root worm, and such forage insects as the clover weevil and the alfalfa weevil.

Mr. MCLAUGHLIN. What progress is that alfalfa weevil making, and how are you getting along with it?

Mr. MARLATT. The alfalfa weevil has not spread as rapidly as was feared, and it is being measurably controlled in the States where it is already established.

Mr. MCLAUGHLIN. It is quite bad in Utah and the adjoining States, or was at one time.

Mr. MARLATT. It is still bad there, but fair control has resulted from cultural and cropping methods and treatment of the stubble.

Mr. MCLAUGHLIN. How is the spread carried?

Mr. MARLATT. It is carried largely by the transportation of the alfalfa hay or of other farm products containing the weevil.

Mr. MCLAUGHLIN. The ripe hay, then, carries the weevil sometimes?

Mr. MARLATT. Alfalfa hay may carry the weevil directly or as packing for other things. Very often the farmer in harvesting his potatoes will line the bottom of his wagon with alfalfa hay, and the weevil will crawl through the potatoes and may be thus distributed. It is for this reason that some of the adjoining States have established quarantines covering not only alfalfa but also fruits and potatoes.

Mr. MCLAUGHLIN. Do these weevils go into the potato and then show themselves the next season?

Mr. MARLATT. I should have said "through the mass of potatoes." It does not attack the potato itself. It confines its attacks to the alfalfa.

Mr. MCLAUGHLIN. Aren't you reducing it and controlling it where it has been found as well as preventing its spread?

Mr. MARLATT. Yes; very materially. The methods of control are largely cultural methods—by cropping or cutting the plant at the critical season to effect control and by methods of treating the stubble. By those and other means the insect has been kept down very materially so that a considerable alfalfa crop is secured even in the regions where the weevil is most fully established.

Mr. MCLAUGHLIN. It has to be cut at a certain time or the whole thing is ruined. Isn't that rue, that it has to be cut at a certain time or it is not suitable?

Mr. MARLATT. In general, yes; but you can control the cropping periods by the periods of cutting; that is, if you advance your period of cutting a few weeks or a week or 10 days, you advance the next period of cutting. You may lose something of your crop by cutting a little earlier, but you can alter the period of the harvest of the succeeding crops very materially by those means; that is, by advancing the crop period of one crop and advancing the successive periods of the succeeding crops.

Mr. MCLAUGHLIN. I do not want to take too much time, but there is one more question. You spoke about treating the stubble. On very large fields I would think that would be difficult. How do you do it?

Mr. MARLATT. The stubble can be disked, dragged, and rolled or it can be burned.

Mr. MCLAUGHLIN. Doesn't that destroy at least the next crop?

Mr. MARLATT. No; not necessarily.

Mr. MCLAUGHLIN. What would naturally be the next crop?

Mr. MARLATT. No; it has not so worked out.

Mr. McLaughlin. Burning, it seems to me, would destroy what would naturally be the next crop, because it burns off the shoots.

Mr. Marlatt. It depends on how you burn it. The burning as practiced does not necessarily destroy the plant, but destroys the insect. The portion of the plant at the surface and beneath the ground will stand a good deal of heat.

Mr. McLaughlin. But the shoots are above the ground.

Mr. Marlatt. The crown is below. It is protected by the soil.

Mr. McLaughlin. The crown is just below, but the shoots are above and I should think burning would destroy the tender shoots. I would be interested to know just how you are doing that, just how you accomplish it, but perhaps we are taking too much time.

Mr. Marlatt. Briefly, an apparatus for burning the stubble was considerably used in the early work. In clean stands of alfalfa this machine did very well, destroying all insect life above the ground. The burned areas developed new growth and became green within a much shorter time than the unburned areas where the weevil remained to destroy the new growth. The difficulty and cost of the burning treatment has led to its general abandonment for other methods of control. I will be glad to send you the documents describing these methods of control.

This educational work is done through the States Extension Service. The States Extension Service arranges the meetings, and the experts of this bureau assigned to the work are detailed to the various meetings to give the information on their special subjects. The meetings are advertised and the farmers of the neighborhood interested are brought together, and by that means the information is localized. In addition to that the men meet individual farmers. They organize demonstration experiments and thus increase the intimate knowledge of methods of control throughout the region.

Mr. McLaughlin. Largely, I suppose, through the county farm agent.

Mr. Marlatt. Very largely through the county agent.

Mr. McLaughlin. Just a word: Do you come in contact with men whose appointment comes through another bureau? How do you find those men generally, as to capacity and efficiency? I want your opinion of them. There is a lot of criticism of them and their work.

Mr. Marlatt. I am very sorry, Mr. McLaughlin, but I can't answer that, because my work has not brought me in direct contact with these men. In general we are all suffering under the conditions imposed by the war. We lose a great many of our best men—not necessarily to go into the fighting ranks but to fill places where they are paid more money in State and other Federal work. This is true of all the other offices of the department, and there has been the necessity of filling these vacancies with new men. We have taken the best men available—men who have had special training in their school work or who have had training in State work. In a good deal of this work which I have described we have called upon the agricultural colleges and experiment stations to nominate men who are familiar with the work in their own States. We have not always selected the men. They have been selected by the men who are in charge of the similar work in the State and who know the men and their qualifications, but it has been a difficult matter to get men on short notice to do this work.

Mr. McLaughlin. I was speaking particularly about the regular county agent.

Mr. McKinley. He says he don't know anything about it.

Mr. McLaughlin. I was one of the first to take up that matter, and I have been led to believe in the value of the work and the character of the men; and I thought that your work, being more than usually complicated, important, or difficult, if the men size up to the needs they are pretty good men.

Mr. Harrison. One of the greatest difficulties is to get competent men. The States Relations Service has perhaps experienced the greatest difficulty of any branch of the department in that connection. Dr. True will be the next witness, and will explain the difficulties.

Mr. McLaughlin. But if a chief of another bureau comes in he might explain without any embarrassment the character of the men. I knew that Dr. Marlatt would not be embarrassed if I asked the question.

Mr. Marlatt. I would be glad to give you a frank statement, but I have no contact, except administratively, with the work—no field contact which would bring me into touch with these county agents. As I understand it, these county agents have worked very efficiently in cooperation with us. They have made arrangements for these local meetings. This demonstration and educational work is additional or supplemental to the work of these county agents.

Mr. Lee. Doctor, is there anything further on that item?

Mr. Marlatt. I may say, as to this item, that the increase practically amounts to a provision for a full year's work, as against a partial year for the fiscal year ending June 30. All the increases can be explained largely by that situation.

Mr. Candler. These increases through these various estimates are proportional estimates, where you take into consideration the whole year?

Mr. Marlatt. In general; yes. In one or two instances the work has so developed as to warrant requesting exceptional increases. The funds for the current year became available fairly late, and necessarily there was time lost in getting the work under way. Our force now is just getting into full working order. It has proven very difficult to get men under existing war conditions.

Mr. Rubey. This fund was available for about nine months?

Mr. Marlatt. For about nine months, and practically three months were lost in getting men, and we haven't yet all that we think we ought to have.

Mr. Lee. Page 21, No. 2, "Control of stored-product insects."

Mr. Marlatt. This is probably one of the most important subjects under the Bureau of Entomology. The crop having been made, is still subject to enormous losses by stored-product insects, and this is particularly true in the South. The losses in the North are much less, but in the South the long period of warmth continues the multiplication of these insects, and the loss may be almost complete within six or eight months in the case of corn, for example.

Mr. Lee. That is particularly true of corn?

Mr. Marlatt. That is particularly true of corn. The loss in Florida and throughout the South is tremendous. The loss begins in the field in the South. Such field injury is almost unknown in the

North, but in the South the corn is attacked in the field and as carried to the cribs is already heavily infested.

Mr. McLaughlin. What is your remedy where those unfortunate conditions exist?

Mr. Marlatt. The remedies are several. In the South very little has hitherto been done to prevent these losses. The object of our educational work here is to bring home to the farmer the fact that these losses are not necessary.

As to the remedies: If corn as gathered is already infested—and if the gathering is postponed until quite late in the season it is usually badly infested—it should be fumigated before it is put into storage. This can be done as the corn is brought in from the field. A simple fumigation box that will hold 25 or 50 or 100 bushels can be used to fumigate with bisulphide of carbon.

Mr. McLaughlin. Is that expensive?

Mr. Marlatt. The cost is moderate. It is something that any farmer who has been shown once can do. It is simple. There isn't any danger in it. The fumigated corn can then be transferred to the bin or granary. It doesn't then matter if the bin is open, as there will be little reinfestation in the late fall and winter. That treatment will substantially safeguard the corn until next summer or until it has been used. The treatment destroys the insect life in the corn when gathered.

That is one of the methods. Another method which we hope to demonstrate throughout the South is to encourage the use of bins or granaries of sufficiently tight construction so that the grain can be fumigated from time to time. With that kind of a bin it would not be necessary to employ the fumigation box, as the corn could be at once fumigated in the bin.

Mr. McLaughlin. And do it on a larger scale?

Mr. Marlatt. Yes; the granary in question which seems to offer the most promise is a steel tank. These are being used now to some extent. They cost a good deal of money, but the saving of one year's loss would more than pay for this type of granary. They are iron structures similar to those used for garages, but made in such a way that they are sufficiently tight to serve the purpose of fumigation. The ordinary granary or bin in the South is open, so that there is little possibility of fumigation. That is another method of control which is practicable, but which on account of the initial expense will be adopted slowly.

Mr. McLaughlin. Have you found any of the farmers down there willing to apply these remedies?

Mr. Marlatt. Yes; they are being used, but very little. The loss is going on with little check at the present time. In the case of this work with stored-grain insects it has been very difficult to get experienced men, and it has not been possible to build up the work as we would like.

There are other methods of control which are under investigation and which may prove to be effective. For example, there is an electrical method of control. As a rule I look upon all electrical methods of control with much doubt. Electricity has been used as the basis of more fakes than anything else, but experiments are being made with an electrical means of control which consists of passing the

grain through a chute between electrodes so that the grain is subjected to a tremendous current of electricity as it passes through. The performance is continuous, and it is maintained that such disinfection can be done at a basis of cost as to make it practicable. This system of disinfecting grain is about to be tested on a commercial scale at Tampa, Fla. At Tampa the conditions of grain infestation are worse perhaps than in any other place in the United States. This is merely a suggestive thing. It has not been worked out, but is in the experimental stage. It may result in another useful means of controlling losses by these insects.

The most available protection now is in fumigation, as described, and in improved storage facilities. Gathering the crop at an earlier period, so as to prevent as much as possible the field infestation, is an additional means of lessening the existing losses. This work also covers, in addition to corn, other grain and food products and mill and elevator storage, work with the pea and bean weevils, etc.

Mr. HARRISON. You are also helping the War Department to control insects in their warehouses, I understand.

Mr. MARLATT. We have been asked informally to advise and assist in the necessary disinfection of the warehouse system in New York City and neighborhood, taken over by the War Department, for the housing of products to be later shipped abroad. The expert who has charge of our stored-grain-product investigations has been in consultation with the officers of the Quartermaster Department in charge of this storage system, and the Department of Agriculture will cooperate in all ways possible in the safeguarding and fumigating of these warehouses.

Mr. RUBEY. I have heard it stated several times in my section of the country where the weevils are bad in corn, a good many farmers there use what they call "high life." They simply take a bottle of this "high life"—or several bottles—and place them in the bottom of the bin, open, and the gasses permeate the corn, and it has a good effect.

Mr. MARLATT. I suppose that "high life" is carbon bisulphide. Does it have an odor?

Mr. RUBEY. It has a very distinctive odor.

Mr. MARLATT. Reminds one of a bad egg? That is carbon bisulphide undoubtedly.

Mr. RUBEY. Those who have used it say that they have had good success with it.

Mr. MARLATT. It is the same method I have just outlined, except in the more or less open bin most of the gas that comes from that liquid is dissipated.

Mr. RUBEY. It will get out, but in a crop of 500 bushels of corn this corn is piled up and the fumes permeate the entire quantity, and they seem to think it destroys the life entirely.

Mr. MARLATT. I am quite sure that an examination would show that they had not accomplished very much benefit. The gas must be contained. Our experiments for many years demonstrate that you have got to inclose and retain the gas for a considerable period in order to kill these insects. The common corn weevil of the South is not easily killed, and if fumigated in that way in an open granary those nearest the escaping gas might be killed, but the mass of the grain would not be very much affected.

Mr. LEE. Doctor, No. 3, I believe, is work along the same line, practically, the control of vegetable and truck crop insects.

Mr. MARLATT. The same general plan of procedure is followed in relation to truck-crop insects. Extensive work on this subject is chiefly conducted where the industry is important, particularly in the New England, Atlantic, and Gulf States, and on the Pacific coast. Work has also been done in Wisconsin, where there is a large amount of trucking near Lake Michigan. Experts have been sent into these districts to work in cooperation with the State extension service.

Mr. LEE. Take up the next item, "Control of the sweet-potato weevil." Is there anything new in that?

Mr. MARLATT. The sweet-potato weevil has come into special prominence during the last year. It has been in this country for some 40 years, coming originally from the Orient—China. It got a foothold in Florida nearly 40 years ago, but was checked by the simple method of stopping the growth of the sweet potato in the infested district. This came about naturally and for the reason that there is no profit in growing this crop in badly infested places. The growth of sweet potatoes was resumed in this region first infested and successfully on the whole.

The insect has spread comparatively slowly until the last year or two when a difference in the method of growing the planting slips for the sweet potato led to the sudden and wide dispersal of the insect. Formerly the sweet-potato slips were grown locally for neighborhood use, affording very little opportunity for the spread of the insect, but in the last year or two the growth of these plants has become a commercial matter, and they have been grown in large quantities in central places and distributed throughout the South. Unfortunately some of those distributing points have become infested with the weevil and have been the means of spreading the insect.

Mr. MCLAUGHLIN. The agricultural appropriation bill carries an amendment, put in by the Senate and concurred to in conference and by the House. I do not remember the amount.

Mr. HARRISON. $20,000 for this work.

Mr. MCLAUGHLIN. Could this appropriation be eliminated in view of that?

Mr. HARRISON. No, sir; but it could be reduced by $20,000.

Mr. MARLATT. The estimate for this item for 1919 is $50,000. You are asked to decrease that to $30,000 in view of the fact that $20,000 has already been provided for in the agricultural appropriation act.

Mr. LEE. Do you think the trouble can be controlled later?

Mr. MARLATT. There is a possibility of controlling this insect. The fact that it can be starved out as it was 40 years ago at Tampa, Fla., makes it possible to anticipate with some confidence its ultimate extermination or a very great reduction of the territory now invaded. The sweet-potato crop is worth nearly $100,000,000. It is an important food crop in the South, and it is worth making the effort under present conditions to save it. It is proposed to use this appropriation in educational work among the growers of the sweet potato throughout the South.

Mr. MCLAUGHLIN. If the distribution of seedlings goes on——

Mr. CANDLER (interposing). They call them potato slips.

Mr. McLaughlin (continuing). The situation will be just the same as heretofore.

Mr. Marlatt. These points of distribution will be carefully inspected and the distribution of slips safeguarded.

Mr. McLaughlin. Have you authority to forbid shipment from suspected places?

Mr. Marlatt. We have authority as to interstate traffic, which has not been taken advantage of under the quarantine act, but the States themselves are establishing quarantines which effect the localization of the production of these potato slips where they can be watched. Florida, where this insect has been especially destructive, now has strict quarantine measures.

Mr. McLaughlin. Now, I do not recall very well the authority given under that quarantine act, but my recollection is that the authority is limited to quarantine against new diseases, new plant diseases, not ase to old ones that were established and known at the time the act was passed. Isn't there something of that kind in the act?

Mr. Marlatt. Yes; in a way, but not as strictly limited as you have stated it. The act applies to insects diseases which are new or not widely distributed, but the distribution is a matter for the Secretary to determine, and he may determine an insect not to be widely distributed whenever there are important parts of the country remaining to be protected.

Mr. McLaughlin. There is no doubt of your authority in this matter?

Mr. Marlatt. No question as to that.

Mr. Lee. Any further questions? If not, take up the item, "Control of deciduous-fruit insects."

Mr. Marlatt. The work in this section is distributed over the portions of the United States where deciduous fruits are the prominent crop. It includes most of the Eastern States, the Mississippi Valley eastward, and the Pacific Coast States. It has relation to educational work in the spraying of orchards for the control of the coddling moth and other insects, controlling peach insects and the insect enemies of other fruits. It is an extension of available information and getting its more general adoption. It is an intensive campaign conducted through the county agents and the general extension service of the States.

Mr. Lee. Any question on that? If not, take up "Control of the citrus-fruit insects."

Mr. Marlatt. The work with citrus fruits is of the same general character. I wish to add, in rgard to deciduous-fruit insects, that it involves also the study of two insects which are comparatively new—the Oriental peach moth, which may ultimately prove to be one of the worst peach insects in this country, and the Japanese beetle.

Mr. McLaughlin. You were going to keep out these new diseases.

Mr. Marlatt. That opens a subject which, with the permission of the committee, I should like to discuss for a moment. There seems to be a prevalent idea that the department has been negligent in keeping out new insects. It so happens, however, that all of these pests which have entered within recent years came in before the

passage of the plant-quarantine act—this peach moth and the others—so that we can plead at least not guilty as accessory.

Mr. LEE. Are any of these pests to fruit, grain, and live stock native of this country?

Mr. MARLATT. About half of the insects are native, including the chinch bug, which is one of the worst. The other half have come to us largely from Europe.

Mr. LESHER. Did any of them come from Germany?

Mr. MARLATT. The white-pine blister rust came from Germany.

Mr. DOOLITTLE. Do our pests get into other countries?

Mr. MARLATT. Oh, yes. The grape industry of France has experienced the worst difficulties it has had in the last 50 years from grape diseases introduced from America, and these diseases have spread from France through middle Europe. Most European countries have laid the strictest quarantine against all living plants from the United States. The appearance of the San Jose scale in this country 15 or 20 years ago led to an increase of these quarantine restrictions on the part of the foreign countries, so that now no plants from America can get into any European country except England, which far north and so cold that they have little to fear; but middle Europe has the strictest kind of quarantine against American plants, and restrictions also on the entry of fruits.

I would like to emphasize the point I made a little while ago, that no injurious insect of importance has been brought to and established in this country since the passage of the plant-quarantine act on the subjects that are normally controlled by that act. The one important insect that has apparently gotten into this country since the passage of the act may prove to be serious. It is a new corn pest, which has appeared in Massachusetts. It did not come in with nursery stock or other plants which would be properly subject to control. It was apparently introduced with raw hemp, used in the making of rope, imported at the port of Boston. Such hemp has been long imported in quantity, but within a year or two this insect was brought in apparently as an incidental passenger with such hemp. It attacks growing hemp in foreign countries, and in Massachusetts is attacking corn and grasses generally. It seems to have a wide variety of food plants. This insect has spread to near-by towns in Massachusetts from the mouth of the Mystic River, where the hemp was entered and manufactured, and has invaded the fields and is threatening to be a very serious corn pest. It is a borer, workink in the cornstalk.

Mr. MCLAUGHLIN. Is it confined to Massachusetts so far?

Mr. MARLATT. It is limited to a district of 15 to 20 miles in Massachusetts. We are undertaking a very careful survey to determine its ditribution and the possibility of control.

Mr. HAUGEN. What is its name?

Mr. MARLATT. We may call it the European cornstalk borer. The difficulty in controlling it is due to the variety of its food plants. Its food plants seem to include practically everything that grows with a stem out of the ground that is not a woody plant; i. e., common weeds and grasses, as well as corn, and it may prove to be impossible of extermination.

Many insects and plant diseases have been excluded as a result of the plant-quarantine act. Seventeen quarantine and restrictive

orders are now in force in relation to foreign plants and plant products. It has been a matter partly of good fortune, but much aided by our efforts, that no important insects have come in with plants for propagation and become established since the passage of that act.

Mr. McLaughlin. Previous to the enactment of that quarantine act we were in much the same position as we were in the matter of immigration. We were an asylum for the oppressed and we worked that overtime.

Mr. Marlatt. We were making efforts for over 14 years to get the law before it was enacted.

Mr. Haugen. You referred to the chinch bug. Is there any possibility of exterminating that?

Mr. Marlatt. No, sir; but there is possibility of controlling it. A native insect as widely established as the chinch bug can not possibly be exterminated.

Mr. Haugen. Has any attempt been made to exterminate it or control it?

Mr. Marlatt. There is no other important farm pest which can be so readily controlled as the chinch bug.

Mr. Haugen. About the only thing to do is to starve it?

Mr. Marlatt. The farmers have largely taken the chinch bug as one of the gambles of the business; but, as has been demonstrated best, perhaps, in Kansas, the chinch bug may be controlled and the losses from it enormously reduced by very simple measures.

Mr. Haugen. What is the remedy?

Mr. Marlatt. The chinch bug has a peculiar habit of hibernation which makes such control possible. When it leaves the corn in the autumn it flies to grasslands and hibernates in the stools of grass. You know various grasses form rather dense stools. It burrows down between the stems of grass into the stools, and even into the ground. There may be a thousand or more in a single stool of grass. The remedy consists in burning such grasslands in the autumn or during the winter; the earlier the better. That results in the elimination of the protecting dead grass and exposes the stools to the action of the elements—to cold and wet and sunshine. The alternation of temperature with the absence of the normal protection results in the death of practically all of the insects.

Another method of control is similarly based on the habits of the insect. The chinch bug migrates to wheat early in the spring and the next generation goes to corn with the harvesting of the wheat. If the wheat and corn are kept widely separated it will eliminate very largely the loss to the corn.

Mr. Haugen. Does the chinch bug do damage to corn?

Mr. Marlatt. It is often very destructitve to corn growing near wheat fields.

Mr. Haugen. If you do not plant wheat there is no danger from the chinch bug?

Mr. Marlatt. Not to corn. The danger to corn comes almost entirely from proximity to wheat or other small grains.

Mr. Lee. Take the next item, "Control of insects injurious to live stock."

Mr. Marlatt. This work has relation to the common insects affecting live stock, such as the ox warble, the bot fly, and the screw worm in

the South. The object is to do as much educational work as possible in the regions specially subject to loss from these insects. Much attention has not been given to this work, as you will notice from the appropriation. It is the expectation to increase this work, especially in the Southwest and the Rocky Mountain regions. Practical field demonstrations will be given in methods of control of these insects, and the available information which the experts of the department and others have obtained will be brought to the farmers, and they will be encouraged to take advantage of that information in means of control.

Mr. HAUGEN. What do you do; send people to the field to demonstrate?

Mr. MARLATT. The work is done through the county agent. The county agent arranges his meetings, as I understand it, and the available experts of the department are asked to be present to discuss their subjects or arrange for field demonstrations.

Mr. HAUGEN. The county agent does the work?

Mr. MARLATT. The county agent cooperates in and continues the work.

The control of rice insects is a very limited subject. One man has been assigned to this work. His attention will be given to Texas and Louisiana.

The control of sugar-cane insects is also a special subject. There are a number of very important insects which affect sugar cane in Louisiana and it is well worth while to do what can be done to reduce the losses from those insects, especially in the case of a crop which has so much importance to us at this time as the sugar crop.

Mr. HAUGEN. Will you have any trouble in procuring all the specialists provided for?

Mr. MARLATT. The greatest difficulty in the world. The weakness of this whole work is right there—I mean the difficulty in getting competent persons. We now have some 86 men working in 40 States. A good many of these men are employed only for a short period.

Mr. MCLAUGHLIN. Forty-eight States?

Mr. MARLATT. Forty States; and we have 86 men now in the field.

Mr. MCLAUGHLIN. You are speaking now of the men you have for all the kinds of work you are carrying on?

Mr. MARLATT. Yes; covering all the topics which have been discussed. A great many of these men are employed for a short period of time, for the season.

Mr. HAUGEN. This is in your division?

Mr. MARLATT. Yes; in the Bureau of Entomology. The work is not yet fully equipped.

Mr. MCLAUGHLIN. Are these men all in the classified service?

Mr. MARLATT. No; many of them are not. For instance, in the sweet-potato work we have 31 men now employed. We are making a special campaign in this work at this time to protect the crop for next year. The Southern States, all of the Gulf States, and also North and South Carolina and Georgia are included in this sweet-potato campaign.

Mr. HAUGEN. What are the requirements?

Mr. MARLATT. We have asked the several States interested to nominate men who are practical and experienced and can carry the necessary information to sweet-potato growers in their States. The

leaders or State directors of the work we furnish; the others have been nominated largely by the State officials themselves.

Mr. McLaughlin. Have you a memorandum there showing the salaries paid?

Mr. Harrison. They are indicated here in the estimates.

Mr. Marlatt. They range from $75 a month upward.

Mr. McLaughlin. And expenses?

Mr. Marlatt. Yes; when in travel status.

Mr. Harrison. The number in 1918 and the proposed number in 1919 is indicated under each item.

Mr. Haugen. What qualifications are required?

Mr. Marlatt. As to qualifications we are not particular except that the men shall be practical men and expert in their subjects. They need not be college graduates, but they must be intelligent men and have a practical knowledge of sweet-potato growing, for example, or of fruit growing, and experienced in spraying and other control operations.

Mr. Haugen. What age?

Mr. Marlatt. They range from 21 upward. Most of them are older men, because the draft has limited our supply of younger men.

Mr. Haugen. Is there any tendency throughout the country to seek these places to avoid military service?

Mr. Marlatt. I think comparatively little, Mr. Haugen. A good many of our men have resigned to go into the service at considerable loss of income.

Mr. McLaughlin. They are not exempt unless you particularly certify that they are absolutely necessary in your work, are they?

Mr. Marlatt. They are not exempt from draft at all, but they are put in the deferred classification.

Mr. McLaughlin. On account of their employment?

Mr. Marlatt. When it is clear that they are more useful to the Department of Agriculture than they would be for other work connected with the war.

Mr. Harrison. The Secretary is considering every case of that kind personally.

Mr. Haugen. Can you give the number approximately?

Mr. Harrison. I haven't them in mind now. I think we have somewhere between 4,500 and 5,000 men out of 20,000 in the department within the draft age.

Mr. Haugen. About one-quarter of them.

Mr. McLaughlin. And there are some of them, I presume, that you evidently certify should be put into a deferred classification.

Mr. Harrison. Yes, sir.

Mr. Overmyer. There is no such thing as a total exemption.

Mr. Harrison. No; except certain classes specified in the law.

Mr. Marlatt. I think that covers the ground. The general statement should be made that all this work is believed to be very valuable work in preventing losses, and, by that means, of increasing the output of the farmer and preserving the output when the crop has once been made. Undoubtedly this fund will repay itself many times over in that respect.

Mr. Lee. We are very much obliged to you, Mr. Marlatt.

Mr. Haugen. I desire to ask Mr. Harrison a question: Were these estimates made before the passage of the Agricultural bill?

Mr. HARRISON. Yes; they were.

Mr. HAUGEN. Were the increases made in the Senate and conference on the bill taken into consideration?

Mr. HARRISON. They were not taken into consideration, because we did not know what the final action would be. In the matter of the tick appropriation and the sweet-potato weevil appropriation, we are suggesting that these estimates be reduced by the amount of the increases included in the Agricultural bill.

Mr. HAUGEN. After we passed the bill in the House?

Mr. HARRISON. Yes, sir. We have asked that the increases made after the bill passed the House be deducted from the items in this bill. There are only two such items—the tick item and the sweet-potato weevil item. We did not include in these estimates any item for grain rusts because of the increase for that purpose provided in the bill as it passed the House.

Mr. MCLAUGHLIN. That appropriation has been increased by the Senate by $250,000.

Mr. HARRISON. There was an appropriation of $20,000 in the bill and that has been increased to $250,000.

Mr. HAUGEN. Is there anything on tuberculosis in these estimates?

Mr. HARRISON. No, sir.

Mr. MCLAUGHLIN. I understand these estimates were made after your regular estimates went into the agricultural appropriation bill as it was presented to this committee in the first place?

Mr. HARRISON. Yes; the estimates for the regular bill were presented to the Secretary of the Treasury on the 15th of October.

Mr. MCLAUGHLIN. It would be proper for us to take into consideration in connection with these emergency estimates such of the appropriations in the agricultural bill as were increased in committee, as we did increase some of them?

Mr. HARRISON. We did not make up these estimates until March 8 and we took into consideration the action of the House committee, but we could not take into consideration the Senate's action or the action of the conferees.

Mr. MCLAUGHLIN. That is the point: You did take into consideration the action of the House committee?

Mr. HARRISON. Yes.

Mr. MCLAUGHLIN. These estimates were made after the House acted and before the Senate acted?

Mr. HARRISON. After the House acted, but before the Senate acted.

Mr. CANDLER. And the only two increases were with reference to the tick item and the sweet-potato weevil item.

Mr. MCLAUGHLIN. Wasn't there some increase in conference following the amendment of the Senate for dairy work and for the cattle tick?

Mr. HARRISON. No, sir: the Senate committee increased the tick appropriation by approximately $129,000. Dr. Mohler suggested that the amount of these estimates be reduced correspondingly.

Mr. HAUGEN. There are four items, are there not?

Mr. HARRISON. No; the tick-eradication item and the appropriation for the control of the sweet-potato weevil. There is no estimate submitted here for tuberculosis.

Mr. MCLAUGHLIN. How about the appropriation for rust?

Mr. HARRISON. We have included nothing for rust. There are only two cases where we have included an appropriation; that is, the tick-eradication appropriation and the appropriation for the control of the sweet-potato weevil.

The CHAIRMAN. The Senate put in an appropriation of $20,000 for the sweet-potato weevil?

Mr. HARRISON. Yes, sir.

COMMITTEE ON AGRICULTURE.
HOUSE OF REPRESENTATIVES,
Saturday, April 27, 1918.

(The estimates for "Prevention of plant-dust explosions and fires" and "Fruit and vegetable utilization" were discussed, beginning at 11.32 o'clock a. m., following Dr. Alsberg's general statement on the Bureau of Chemistry estimates, reported elsewhere in these hearings.)

III.

FOR THE PREVENTION, CONTROL, AND ERADICATION OF INSECTS AND PLANT DISEASES INJURIOUS TO AGRICULTURE, AND THE CONSERVATION AND UTILIZATION OF PLANT PRODUCTS, $911,300—Continued.

BUREAUS OF CHEMISTRY, MARKETS, AND PLANT INDUSTRY.

STATEMENT OF DR. C. L. ALSBERG, CHIEF OF THE BUREAU OF CHEMISTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. Gentlemen, turn to page 26. There is a joint project there in which several bureaus are interested, the Bureaus of Chemistry, Markets, and Plant Industry, "Prevention of plant-dust explosions and fires."

Dr. ALSBERG. This project has essentially four parts. One part consists in the prevention of fires, with the attendant destruction in thrashing outfits. It is work that we have done on a small scale for some years. It began three years ago, I think, when the department received complaints that thrashing outfits in the Pacific Northwest and intermountain country of Washington, Idaho, and Oregon were being blown up by having dynamite planted by the I. W. W. in the wheat stacks. Such were the reports as they came to us. Of course, it became evident at once that another possible cause for these fires and explosions was to be found in a combination of circumstances. One was the dust and smut, and another the very dry climatic conditions, a combination that created the danger of the exploding of the dust.

I think I have explained to you before that when combustible dust is mixed in the right proportion with oxygen or air, a flame or spark will explode it in just the same manner as gasoline that has been mixed in a carbureter in the right proportion with oxygen or air. That, of course, is well known, because it is one of the chief causes of explosions in some coal mines in which the fine coal dust is a cause of explosions. Our investigation showed such to be the case up there, and we have been able to introduce a system of wiring the machines,

so that there will be no accumulation of static electricity from the friction of the straw over the cylinders and of the belts over the pulleys. We have definite evidence that such electricity, when it produces a spark, will set off this explosive mixture of smut, dust, and air. Another preventive measure is to put on top of the thrashing machine a small automatic fire extinguisher, for which we claim no special inventive credit, except that due the suggestion that it be put on the machine. We further recommend the attachment to the machine of a suction blower to suck up the dust and spores out of the machine from over the cylinder. These appliances are being very widely used now in that section, and, in fact, in some instances the thrashing companies in that territory are equipping their machines with these rather simple devices. Of course, we worked with the thrashing companies from the beginning.

We wish to spread this project, the demonstration of these devices, to other sections of the country where we have found that there are fires and explosions in thrashing machines. I think we have a map giving the territory in which we wish to demonstrate. [Producing map.] These circles [indicating] demonstrate where the devices are needed, because we have evidence that there are a good many thrasher fires in these localities. They are not so numerous as in the very dry Northwest country, nor do they occur every season, but we do not know whether next season is going to be a dry one or not. Three or four years ago a number of thrashers blew up in those three States I mentioned, I think, over 300, with an estimated loss certainly of over a million dollars in capital, so that some insurance companies refused to cover thrashing outfits. The work in these States here is pretty well under way. We want to do similar work in these other sections, where we know there are a good many fires and a great deal of loss of thrashing equipment and of grain.

The CHAIRMAN. What States does that include?

Dr. ALSBERG. Washington, Oregon, Idaho, central California, southeastern North Dakota, western South Dakota, and central Minnesota. Then Colorado, a bit of Wyoming, Nebraska, Kansas, Oklahoma, and adjacent portions of Texas, and parts of Michigan, Illinois, Indiana, Ohio, and Pennsylvania.

The CHAIRMAN. Those are the States that you want to do that work in, and in what States have you done that intensive work already?

Dr. ALSBERG. It has been confined to Washington, Oregon, and Idaho. I may say that last summer we did a little preliminary work in California, enough to convince us that the work should be done there next season. From the other States we simply have records and reports from the underwriters, insurance companies, and farmers that there are a great many fires in thrashing outfits.

The CHAIRMAN. Are there any questions on that?

Mr. MCLAUGHLIN. Is there more likelihood to be an explosion where there is smut than where there is not?

Dr. ALSBERG. Yes; because there is more dust.

Mr. MCLAUGHLIN. Is that the only reason? Is there anything about smut that makes it more explosive, mixed with dust?

Dr. ALSBERG. Smut ignites at a lower temperature than dust. That would prove that smut is a little more explosive than some other kinds of dust.

Mr. HAUGEN. What have you to suggest as to fires in haymows and barns?

Dr. ALSBERG. No; we have not done any work on that.

Mr. HAUGEN. There are many fires?

Dr. ALSBERG. There is a good deal of it, but I think the causes are different from those covering the fires we are now considering.

Mr. HAUGEN. It is generally due to putting new hay in the barn?

Dr. ALSBERG. That is a matter that we propose to consider, but we have done no work on it yet. The chances are that there is fermentation which produces combustible gases, and it is planned to undertake an investigation, but we have not yet started it. All we have examined so far are the gases produced in sour grain in elevator bins, because some of the grain elevator people believe that when grain gets out of condition, gases, which are great fire risks, are given off. We know that such gases may kill a man who climbs into a partly empty bin. There is a reason for this, and we have been looking into it. We have taken the matter up with the Public Health Service, because these troubles might be classed as vocational diseases. Of course, that also happens in silos. Getting into a silo that has been shut up for some time is a dangerous performance.

The CHAIRMAN. Take up the next line of the work.

Dr. ALSBERG. When the pathologists of the Bureau of Plant Industry noticed that we had these machines equipped with fans which were removing the smut they suggested that this might be a method of combating smut. So the Secretary allotted some money which is being expended in connection with the Bureau of Plant Industry on smut control, in which they propose to cooperate with us under this appropriation, and to test out the smut removal on a large scale. We have indications, for example, that the installation of a properly constructed fan, which, of course, is not very expensive, with a device to catch the dust that the fan sucks out from the thrashing machine, makes it possible to remove from the grain from 60 to 85 per cent of all the smut contained in it. This, of course, could be collected and destroyed, thus preventing at least the spreading of that amount of smut over the fields. Now, it is very hard to say how effective that may be. If our work this summer should go on, and should indicate that in this manner enough smut is removed to reduce the amount of smut that develops in that territory in future years, it might be wise for the various States to pass legislation compelling the use of such a contrivance on the thrashing machines harvesting grain, where this is done in the fields, as is the case in the Northwest.

We also want to use a part of this appropriation to demonstrate the cleaning of grain, for the fan has the further advantage of cleaning the grain. We did some preliminary work last summer which so effectively cleaned the grain without any additional expense that those who tried it were exceedingly well pleased, because they secured an extra good price for their grain in the Portland market. So we believe that it will be possible by demonstration to induce many people to adopt this method of cleaning grain. This, of course, means a great deal, because it is foolish to transport on the railroads 5 or 8 or 10 per cent of worthless material, as is frequently the case at the present time. Therefore, from the war-emergency standpoint,

it is important to demonstrate this particular method of cleaning grain.

Mr. HAUGEN. Does the fan require much extra power?

Dr. ALSBERG. Very little. What power would you say, Mr. Price?

Mr. PRICE. They do not affect the installation in any way whatever.

Dr. ALSBERG. They are little bits of fans?

Mr. PRICE. Yes.

Mr. ANDERSON. They do not add to the cost of thrashing?

Dr. ALSBERG. No. You simply attach it to the engine that runs the rest of the machine. It requires no additional labor.

Mr. HAUGEN. If one had a large fan, would it be necessary to install an additional one?

Dr. ALSBERG. The fan you refer to is at the rear of the machine. This is on top. We have a blue print drawing, if it would interest you, of a machine equipped in this way. It is on the deck of the machine up here [indicating]. This is the usual fan, and this is the extra equipment.

Mr. HAUGEN. Here is your cylinder here?

Dr. ALSBERG. That is the cylinder. There is the plan looking down on top.

Mr. HAUGEN. How do you dispose of it?

Dr. ALSBERG. At present we have been disposing of it by blowing it here into this separate box, you see. These are flannel, and these are pieces of wood.

Mr. HAUGEN. You just dump the box?

Dr. ALSBERG. The air goes through here, and the smut remains in here, and can be collected here, and can either be burned or treated with an antiseptic.

Mr. HAUGEN. There is not a considerable amount, then, in each setting. How much would there be in a setting?

Mr. PRICE. In the Pacific Northwest some fields have as high as 40 or 50 per cent in them, which makes several wagon loads.

Mr. HAUGEN. A setting?

Mr. PRICE. One setting.

Mr. LEE. What part of the engine is that on?

Dr. ALSBERG. On top.

Mr. LEE. On top of the thrasher box?

Dr. ALSBERG. On top of the thrasher box. Here is the cylinder and the grain is fed in here. This is the separator and here is the cylinder. It is up on top here and sucks down here.

Mr. HAUGEN. Would it not be better in order to save losses, to treat the seed grain?

Dr. ALSBERG. I think the two things are supplemental to each other.

Mr. HAUGEN. Could it not be done entirely in that way, that is, by treating the seed?

Dr. ALSBERG. Now, you are asking me, Mr. Haugen, a question in pathology that I am not competent to answer. I am not a pathologist. The wiring of the machine may also be interesting to you, to prevent the development of static charges. Here is a little fire extinguisher which contains soda and acid, and you tip the bottle of acid. It is automatic, because here you have the usual fusible link device that sets it off.

Mr. ANDERSON. You simply ground the electricity.

Dr. ALSBERG. We ground it. The cylinder moves in a film of oil. The oil does not let the electricity through, so we have a long brush on the cylinder shaft running it into the ground.

Mr. ANDERSON. You just take the static electricity and ground it?

Dr. ALSBERG. That is all it amounts to. You sometimes have sparks as long as this [indicating] in that dry territory. All you need to do is to get it down to where the moisture is.

Then we want some additional work that I would like to tell you about. It is designed to prevent the loss of grain in elevators. You may recall that few months ago a big explosion in Brooklyn burned down one of the big elevators there. That was a dust explosion. Before that, a year ago, an explosion in Baltimore blew up a railroad elevator. That was a dust explosion. Here are a few photographs of various dust explosions. This photograph of a thrasher explosion will give you the general effect. Here are thrasher explosions. Here is one that happened to be caught the moment it blew up. We did not get that. That plate was given us by a man who happened to take it.

The CHAIRMAN. Doctor, please take up your next item.

Mr. HAUGEN. A number of explosions were charged up to the Germans, were there not?

Dr. ALSBERG. In answer to Mr. Haugen's question, I might say that we have investigated a number that have been charged up to the Germans, in which cases we have found that they came from a perfectly plain cause; that it was really due to these dust explosions. I do not mean to say that there were no such explosions, but we have not found any.

Then the mill and elevator explosions, you know, of course, have caused an immense amount of loss, due to these dust explosions. The Secretary thought it wise to organize an intensive campaign to educate these superintendents, owners, and workmen in mills and elevators, because this applies not only to flour mills and grain elevators, but to sugar refineries, where sugar is powdered, to cocoa plants, and to almost any kind of a plant that mills dry combustible material. We have in the field a lot of men who have cooperated with the Food Administration and the Grain Purchasing Corporation. We have been acting, to a large extent, through the members of the Food Administration, and in that way have been able to get close to a lot of people in the grain-milling industry, without ourselves having to employ as many agents as otherwise would be necessary. We have held meetings of elevator and millmen in all sections of the United States. We have divided the country into a number of districts, with headquarters in Kansas City, Minneapolis, Chicago, and New York, where we have a force of men who travel from elevator to elevator, from flour mill to flour mill, going over the plants and pointing out to the owners of the plants where they were running a great risk from this kind of a fire, and inducing the owner in most cases to put in such precautionary measures as will reduce very appreciably the danger from explosion and from fire risk. At the same time we have tried to get hold of the individual workmen. We have adopted for this particular purpose the pledge-card system. We have induced the individual workmen to sign up an agreement that he would take care not to do certain things which

are dangerous in these plants. We have had a most excellent response. While it is impossible to say just exactly what is being accomplished in a campaign of this kind, because you can not tell how many fires there would have been if you had not done the work, still we feel confident that it is going to have the effect, and has had the effect, of greatly reducing losses of grain and flour and food materials from these causes.

Mr. ANDERSON. Then it is a question, as I understand it, of having the necessary machinery to collect and dispose of the dust?

Dr. ALSBERG. Well, there are a lot of possible precautions besides dust prevention and collection. Many practices in the elevators are dangerous. For example, in some elevators if the men want to see how much grain is in a bin, they drop in an electric light on the end of a wire. That light often is not guarded. It may happen to strike against the side of the bin and break as an electric light will. The bin is full of dust, and the bin may be blown up from the spark from the incandescent film. Then there is the question of smoking around a plant. Only this morning I received a report on a coca mill in Burlington, Vt., which blew up. Apparently they were making some repairs on Sunday, and also sweeping the place out. The man making the repairs had a brazing torch near where the sweeping was going on. Apparently his torch exploded dust.

In other words, there is not enough appreciation among the men at these plants of the simple ordinary precautions, which do not involve any expenditure of money whatever, but must be taken if fires are to be prevented. In addition, it is of course, important to have dust collecting devices and to ground machinery, so no static electricity can accumulate. It is also important before beginning operations to inspect the belts and elevator legs, to guard against choke-ups. In a number of cases, when they start up in the morning, the belt in the elevator leg carrying the buckets slips, the pulley turns, the belt does not move, and either electricity is generated, or else the belt actually takes fire from friction. The dust in the elevator leg blows up, and the explosion is propagated through the conveyor-system until it strikes a half filled bin, which is full of dust. That bin blows out, and the whole plant goes up.

The CHAIRMAN. Take up the next item, "Cotton-gin explosions and fires."

Dr. ALSBERG. Our men in the field, working in Texas and adjacent parts of Oklahoma, found that there were last year a number of fires in cotton gins. Now, a cotton gin, if the weather is dry, presents ideal conditions for an explosion, on the same principle that fires occur in elevators. Take lint. It is very fine, it burns easily; and is really a very dangerous material to handle. Yet, those who own or run the gins have no understanding of the dangers that exist. Last year was a particularly dry season in Texas. In that territory apparently we have in the cotton gins the conditions for fires due to the development of static electricity, which we have proved to exist in threshing machines. The first purpose of this appropriation is to ascertain whether the precautionary measures which were found so valuable in other industries will be valuable in the prevention of fires in cotton gins, and, if so, to demonstrate them vigorously this season. An unusually large number of fires occurred in Texas, in Oklahoma, in Louisiana, and in Mississippi last year. Of

course, ordinarily, States like Louisiana and Mississippi have a rather humid atmosphere, and it may be that next year there will be no large number of fires, but it seems to us that precautionary measures should be taken in case the season is a dry one. This money is for the demonstrations in that territory.

The CHAIRMAN. Are there any questions on that, gentlemen? If not, Dr. Alsberg, your next item is on page 30, "Fruit and vegetable utilization," which is a joint project. I would like for you to say a few words about that.

Dr. ASBERG. This involves the broad question of drying, conserving, and utilizing fruits and vegetables by preserving, by freezing and by fermentation. It was proposed to spend the main part of the fund on work in connection with utilizing fruit and vegetables by drying.

The CHAIRMAN. What work have you done to encourage the establistment of these various plants?

Dr. ALSBERG. We did a good deal last season, but not as much as we wished, because the fund that we have been working with became available rather late in the season. We have assisted in the establishment of some plants in the North and one in western New York. We have assisted in the establishment of two potato-drying plants in Michigan, one a potato-drying and starch-making plant, because the two should go together, although starch making is not a drying process.

Mr. MCLAUGHLIN. At what place?

Dr. ALSBERG. We have assisted your friend at Travers City, as you will recall, and we have helped in establishing a plant in the State penitentiary. The warden asked for assistance. We have endeavored to establish a large drying plant in Colorado, without success so far, because we could not procure the suitable local cooperation. We are in process of establishing a similar plant in Wisconsin. Of course, we have not had the authority to build and put up these plants ourselves. We simply assisted with advice, sometimes with a loan of equipment, and with services, to various individuals or corporations who are furnishing the plants, the capital, the material, and the equipment. In other words, we have supervised and lent a helping hand.

Mr. MCLAUGHLIN. How are you getting along at Travers City?

Dr. ALSBERG. Very well. I had a report from Mr. Morgan recently, and my understanding was that he was going to make a very nice go of it.

Mr. MCLAUGHLIN. Did you find that he had the equipment up to his representations?

Dr. ALSBERG. Yes; he did not misrepresent anything. We were able to loan him more equipment than we thought possible at that time. He has since returned some of that equipment, because he seems to be a very ingenious individual and has built for himself duplicates, which in some respects are improvements on the equipment we loaned him.

Mr. MCLAUGHLIN. I knew he would not misrepresent, but I thought he might possibly be mistaken as to what use could be made of the paraphernalia he had up there.

Dr. ALSBERG. No; I think he was right on that.

Mr. HAUGEN. What you refer to—was it something you bought, something you invented, or what?

Dr. ALSBERG. Some of it was invented; some of it was imported from Germany before the war. We were fortunate in getting some equipment for the handling of potatoes, which, of course, is very highly developed in Germany. It is just about the last thing that was obtained from Germany some three years ago.

Mr. HAUGEN. Is this equipment now being manufactured here?

Dr. ALSBERG. This particular equipment is not being manufactured in this particular form. There is a substitute equipment, which is not so good, but which will do the work, and if there is a demand for it undoubtedly it is perfectly simple to build it here. There is no patent protection or any peculiarity about it. Anybody can build it. It was necessary for us to have some of it here as a model.

Mr. HAUGEN. You are not going into the business of furnishing equipment in general, but simply assisting them?

Dr. ALSBERG. No; we happened to have this equipment lying idle, and as this constituent of Mr. McLaughlin wanted to begin, we sent it up there, installed it for him, and loaned it to him. He worked with it until he could put in his own equipment. It has been returned to us since.

The CHAIRMAN. Doctor, the present appropriation bill carries a large fund of $250.000 for this work for the next year. Have you figured on a plan as to how you might use that?

Dr. ALSBERG. Use that new appropriation?

The CHAIRMAN. Yes.

Dr. ALSBERG. I have been figuring on it for the last three or four days, but I have not had information as to the form in which it is going to pass. The language of the authorization under this new appropriation, which has practically been agreed upon, I understand, is different.

The CHAIRMAN. It has been passed by both Houses.

Dr. ALSBERG. I think the language is somewhat different. Our use of it will have to depend somewhat upon the interpretation to be put on that language. As I read it, it limits the appropriation to cooperation with corporations, individuals, and institutions, and just exactly how far we can go in that I am not quite certain. It gives us no authority to build plants, as I read it, unless it be for the purpose of producing materials for the Army and Navy.

Mr. HARRISON. You would not want that statement to be regarded as conclusive, would you?

Dr. ALSBERG. No.

Mr. MCLAUGHLIN. These ideas were entertained: That Dr. Alsberg's bureau had worked out many of the processes and had the information sufficient to advise, and, if necessary, construct proper apparatus so that it was not necessary, during this emergency at least, to provide a lot of money for experiments, and that there were some 60 or 80 plants already built and in operation in this country, and if there was urgent need of food and the necessity of supplying a larger amount of it, it might be advisable for the Government to assist and cooperate with the plants already constructed.

Dr. ALSBERG. It was not, I think, the intention when that language, as it originally existed, was drawn up, that it should be used for experimental purposes. The thoughts that I have so far entertained

as to what we should do under this language, as it now exists, are these: We should, in the first place, endeavor to get some standardization of these products for the manufacturers, so that they will put out products of uniform quality. We should show them how to produce articles of uniform quality, because the great danger that I see is that some manufacturers, with a considerable output, but a lack of knowledge of the proper methods of preparing these products will put out inferior products which will reflect upon the whole proposition.

Mr. HAUGEN. Could these manufacturing plants be used for supplying our Army and Navy?

Dr. ALSBERG. Undoubtedly. I have not the least idea whether the Army or Navy wants to take this up, nor have I had an opportunity of ascertaining.

Mr. HAUGEN. You mean to demonstrate the value of the product as a good thing for the Army and Navy later?

Mr. CANDLER. My information was that the Army were buying it, and that they had already bought $3,000,000 worth. There were 50 of these plants in the United States already in operation, and therefore we thought the cooperative feature in it was sufficient.

Dr. ALSBERG. That is very true, but as a matter of fact, the Navy will have none of it at all at present, so far as I know.

Mr. HAUGEN. I was out at the camp at the University the other day, and they have dried apples over there and are using them.

Dr. ALSBERG. I am not figuring on dried apples, which are a standard article. There is no need of encouraging the production of dried apples and dried peaches. In California alone hundreds of millions of pounds of fresh fruit are dried. I was thinking of things like potatoes and the various vegetables, which are not now on a large scale commercial products. The Army has consented to consider dried products only because of the shipping situation. That is a fair statement of the situation. The Navy says it does not need it, as it has facilities on shipboard to take care of the sailors. The Army is compelled to consider these products because of the shipping situation. We will have a strong prejudice to overcome, not merely in official circles, but on the part of consumers generally. The best way to overcome that prejudice is to see that the manufacturers put out only a high-grade, standard, and uniform product. I think that can easily be done by getting them together, by demonstrations, and by assisting them to learn how to produce such products. That, I think, must be the first step.

Then, there is further work to be done for certain specific products. I have in mind particularly the sweet potato. I think no agricultural product in the dried condition has a greater future than the sweet potato. There is none in which more good food material, which now is wasted, could be conserved, because the sweet potato is a notoriously perishable product. A serious effort should be made to demonstrate and encourage the production of dried sweet potatoes, and especially the production of sweet-potato flour. This plan can not be used by itself to produce bread, but it can be used as a flour substitute, and, when mixed in the proper proportion with other cereals, produces very delicious pastry, cakes, pies, crackers, and the like. I think that there is a great future for this product.

Mr. HAUGEN. Now, what is there to be gained outside of the item of transportation?

Dr. ALSBERG. In what?

Mr. HAUGEN. In the dehydration process.

Dr. ALSBERG. You can not deal with all products alike. In the case of ordinary vegetables?

Mr. HAUGEN. Well, take potatoes, for instance.

Dr. ALSBERG. Irish potatoes—white potatoes?

Mr. HAUGEN. Yes.

Dr. ALSBERG. There is nothing to be gained in the process, except in transportation, and the prevention of loss from decay. I have not the least thought that after it is dried, it is superior to what it was before.

Mr. HAUGEN. It is not superior?

Dr. ALSBERG. It is not superior.

Mr. HAUGEN. It is not equal?

Dr. ALSBERG. It is not entirely equal, but it is still a good product.

Mr. HAUGEN. How does the cost of the process compare with the cost of transportation locally? Would it be a paying proposition, even if the quality were the same?

Dr. ALSBERG. Roughly, you reduce it from 1 to 5.

Mr. HAUGEN. But the expense?

Dr. ALSBERG. The expense of production is not over a cent and a quarter, about a cent and a quarter on the dried product.

Mr. HAUGEN. On a pound or a bushel?

Dr. ALSBERG. A pound of the dried product.

Mr. HAUGEN. But that is quite expensive. That would more than offset the transportation charges.

Dr. ALSBERG. But you also must consider the loss from decay in that connection.

Mr. HAUGEN. What would be the loss from decay, where it is properly stored?

Dr. ALSBERG. That varies according to the conditions. It may be 5 per cent, and it may be 25 per cent. In the case of sweet potatoes, probably not 50 per cent of the crop of the sweet potatoes of the country is actually consumed. That is a fair statement, I think. It varies in different products. In the case of white potatoes, it may be 5, 10, or 15 per cent.

Mr. HAUGEN. Then the loss from decay would be the only gain?

Dr. ALSBERG. The saving in loss from decay and in transportation charges represents the only gains.

Mr. HAUGEN. The transportation charge would be small compared with the cost of the drying process, if it were one cent and a quarter per pound. The transportation charges would probably not exceed half a cent a pound.

Dr. ALSBERG. Well, if you take the transportation cost from such a point as Grand Junction, Colo., to Chicago and New York, the transportation would be 60 cents or 80 cents, or $1, per hundred pounds.

Mr. HARRISON. Is it not also a question of carrying over from season to season?

Dr. ALSBERG. That was included in the question of loss from decay. The reason we can not carry it over from season to season is because it decays.

Mr. HARRISON. I understood you to say that you believe the drying industry in this country has to some extent the same possibilities of development as the canning industry.

Dr. ALSBERG. I think that is quite true. When you have converted sweet potatoes into sweet potato flour you have done a very important thing in conservation.

The CHAIRMAN. Let me make this suggestion, Doctor: Your big problem here is to distribute equally from year to year your supply of food or to conserve it equally. That is the first big thing in this business. The next thing you have got to do, the third step in your problem, is to educate the people in these congested sections to eat this stuff.

Dr. ALSBERG. That is very true, Mr. Lever. We must educate the people to eat it. We must educate them in the methods of preparation. We must not regard these things as substitutes for vegetables, but as really a new type of foodstuff, which should be prepared and regarded in its own way and treated on its own merits. You would not consider sliced dried apples in the same light as the fresh apples. Each has its own merits.

The CHAIRMAN. That is neither here nor there, because we have gone over the wheel now, and we will ask you how you are getting along with that next year.

(See also statement by Dr. William A. Taylor relative to features of the project, "Fruit and vegetable utilization," conducted by the Bureau of Plant Industry.)

The following statement shows, by projects, the allotment of funds made by the Secretary of Agriculture from the $441,000 appropriation provided by the food-production act of August 10, 1917, "for the prevention, control, and eradication of insects and plant diseases injurious to agriculture and the conservation and utilization of plant products":

Allotment of funds, by projects, under the food-production act of Aug. 10, 1917.

Project.	Original allotment.		Increase or decrease.		Total allotment.
	Amount.	Date.	Amount.	Date.	
Bureau of Plant Industry:					
1. Cereal-smut eradication	$110,000	Aug. 21, 1917	{ −$6,500 − 5,000	{ Feb. 2, 1918 Mar. 16, 1918	$98,500
2. Peanut conservation and utilization	19,000	do	−11,500	do	7,500
3. Control of cotton, truck, and forage-crop diseases	19,200	do	+ 7,200	do	26,400
4. Farm storage of sweet potatoes	15,000	Sept. 8, 1917			15,000
5. Location of Irish-potato seed stocks	10,000	do			10,000
6. Plant-disease survey	15,000	Aug. 21, 1917	+ 3,500	Mar. 16, 1918	18,500
7. Fruit and vegetable utilization	15,000	Oct. 5, 1917	+ 4,800	do	19,800
8. Control of grain rusts through eradication of barberry	12,500	Feb. 2, 1918			12,500
9. Castor-bean production and utilization	4,738	Mar. 16, 1918			
10. Maintenance of field-bean seed supply	7,500	do			7,500
11. Field supervision of war-garden work	2,500	do			2,500
12. Production of cereals and grain sorghums	5,000	do			5,000
13 Sugar-beet nematode work	2,000	do			2,000
14. Pathological inspection of fruits during processes of marketing	4,800	do			4,800

Allotment of funds, by projects, under the food-production act of Aug. 10, 1917—Continued.

Project.	Original allotment.		Increase or decrease.		Total allotment.
	Amount.	Date.	Amount.	Date.	
Bureau of Entomology:					
1. Control of cereal and forage insects	$45,575	Aug. 18, 1917	−$5,000 −14,000	Feb. 14, 1918 Mar. 7, 1918	$26,575
2. Control of stored-product insects	22,000	Aug. 18, 1917	− 5,000 − 1,500 − 5,000	Dec. 15, 1917 Mar. 21, 1918 Apr. 12, 1918	10,500
3. Control of vegetable and truck crop insects	30,000	do	−10,000	Mar. 7, 1918	20,000
4. Control of sweet-potato weevil	30,000	Mar. 7, 1918			30,000
5. Control of deciduous-fruit insects	15,000 6,000	Aug. 18, 1917	+ 5,000 + 5,000 +10,000	Dec. 15, 1917 Feb. 14, 1918 Mar. 16, 1918	35,000
6. Control of citrus-fruit insects		do			6,000
7. Control of insects injurious to live stock	10,000 5,600	do			10,000
8. Control of rice insects	5,600	do	− 4,000 − 500	Mar. 7, 1918 Mar. 21, 1918	1,100
9. Control of sugar-cane insects		do	− 2,000	Mar. 7, 1918	3,600
10. General supervision of emergency insect-control work	6,000	do	− 500	Mar. 21, 1918	5,500
11. General insect-control work	2,500	Mar. 21, 1918			2,500
12. Control of banana root borer	1,000	Apr. 12, 1918			1,000
Bureau of Chemistry:					
1. Prevention of plant-dust explosions and fires	25,000	Nov. 13, 1917			25,000
2. Fruit and vegetable utilization	22,000	Oct. 5, 1917			22,000

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Thursday, April 25, 1918.

(Mr. Lever resumed the chair at 11.50 a. m., at which time the estimates of the States Relations Service were discussed, following Mr. Marlatt's statement, reported elsewhere in these hearings.)

IV.

FOR INCREASING FOOD PRODUCTION, ELIMINATING WASTE, AND PROMOTING CONSERVATION OF FOOD BY EDUCATIONAL AND DEMONSTRATIONAL METHODS, THROUGH COUNTY, DISTRICT, AND URBAN AGENTS AND OTHERS, $6,100,000.

STATES RELATIONS SERVICE.

STATEMENT OF DR. A. C. TRUE, DIRECTOR OF THE STATES RELATIONS SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. Dr. True, take up the estimates for the States Relations Service, on page 32.

Dr. TRUE. The funds under the food-production act allotted by the Secretary to the States Relations Service have been used for the expansion of the extension work in agriculture and home economics, as carried on under the Lever Act, and the appropriation for demonstration work to the Department of Agriculture. This matter was discussed and explained to the committee at the hearing on the Agriculture appropriation bill on the 8th of January, and a summary statement of the activities under both the regular appropriations and the emergency appropriations was made and in-

corporated in the hearing at that time. Since then the work has simply consisted in the further expansion of the forces engaged in those cooperative extension enterprises. This includes the force employed as county agricultural agents, as boys' and girls' club leaders, and as home demonstration agents.

The CHAIRMAN. Would you be able to put into the record or to make a statement here of the number of agricultural counties which we have in the United States—which, I think, we know, but which I would like to have in the record—the number of counties which have agents, and the number of counties which do not have agents, either men or women, the total number of agents employed in the United States, also in each State, both men and women, under the regular fund (the extension fund), the agents carried in the Agriculture appropriation act from year to year, and the number now employed under the emergency fund, and the number contemplated to be employed under the emergency fund, and under these other funds for the next year? Could you do that?

Dr. TRUE. Yes, sir; I think we could give the committee about what it wants.

Mr. HAUGEN. The number of men and women both?

Mr. HARRISON. It might be well to indicate not only the number now employed, but also the number to be employed by June 30. We are appointing men every day, so that it probably will be helpful to know what the total number for 1918 will be.

The CHAIRMAN. I think the suggestion of Mr. Harrison is an improvement on mine.

(The statement referred to follows:)

STATEMENT SHOWING THE EXTENT OF COUNTY AGENT AND HOME DEMONSTRATION WORK THROUGHOUT THE UNITED STATES.

There are at present 2,957 counties which may be classed as agricultural counties, but at least 100 of these have so little agricultural land or population that they do not require the services of an extension agent.

The total number of counties having the full or part time services of a county agent is 2,450; and there are employed altogether 2,650 county agents and assistants, of whom 1,860 are on the emergency rolls. It is expected that by the 1st of July next 2,800 counties will have the services of an agent.

The total number of counties having the part-time services of a home-demonstration agent is 1,675, and there are employed approximately 1,150 home-demonstration agents, of whom 825 are paid from the emergency funds.

At the present time there are about 900 men and women employed in club work, of whom 730 are serving as local county club leaders, and a similar number are paid from the emergency funds.

In addition, there are 170 counties having the services of negro men agents, and the same number of counties having the services of negro home-demonstration agents. There are also 190 home-demonstration agents working in cities.

At present a considerable number of agents, formerly carried on the regular funds, are paid from the emergency funds. This is due to the using up of the regular funds by the colleges in increasing their extension forces in anticipation of the receipt of the emergency funds. Readjustments will be made at the beginning of the next fiscal year.

Altogether there are approximately 5,400 men and women cooperatively employed by the United States Department of Agriculture and the State agricultural colleges, of whom 3,700 receive a part or all of their salary or expenses out of the funds provided under the food-production act. About 1,700 at the present time receive a part of their salary or expenses from either the Federal or State Smith-Lever funds.

Counties having the services of a county agent.

State.	Number of agricultural counties.	Counties with services of at least one agent.		Counties with services of part-time agent.		Counties with services of assistant agent.		Number of negro agents.		Counties served by negro agents.
		Regular.	Emergency.	Regular.	Emergency.	Regular.	Emergency.	Regular.	Emergency.	
Alabama	67	44	18					7	8	16
Arizona	12	1	4	4	2					
Arkansas	75	30	35		8		2	5	7	16
California	58	3	28				23			
Colorado	35	14	11	2	3		1			
Connecticut	8	8	1				5			
Delaware	3		3							
Florida	53	21	29		2		3	1	7	8
Georgia	152	31	83		16			3	3	16
Idaho	39	14	8				1			
Illinois	102	11	22		8		31			
Indiana	92		69		12		18			
Iowa	99	11	81				39			
Kansas	105	14	22		22		7			
Kentucky	120	32	57		23		1		2	3
Louisiana	64	34	29		2		8	6	5	12
Maine	16	12	1		8		4			
Maryland	23	20	2					1	2	5
Massachusetts	15	10	1		17		1			
Michigan	84	30	33		6		12			
Minnesota	86	10	66				5			
Mississippi	81	29	45		11		13	3	6	11
Missouri	114	7	26		30		8			
Montana	41	10	13				5			
Nebraska	93	7	35		46		8			
Nevada	15	3	2							
New Hampshire	10	10					10			
New Jersey	19	8	8				7			
New Mexico	26	10	9	3			7			
New York	57	17	37				40			
North Carolina	100	42	53		2			4	10	26
North Dakota	51	10	17		12		2			
Ohio	75	8	43		10		21			
Oklahoma	77	58	19			4	12	3	2	12
Oregon	35	1	23		2		4			
Pennsylvania	67	19	32							
Rhode Island	5	1		2			5			
South Carolina	45	32	12					3		3
South Dakota	66	11	40		6		17			
Tennessee	96		81		10				6	14
Texas	250	64	125		5		33	2	6	6
Utah	28	10	11	2	2					
Vermont	14	11					7			
Virginia	100	17	52		4		2	17	2	21
Washington	37	9	21				8			
West Virginia	55	13	32				13			
Wisconsin	71	29	27		5		2			
Wyoming	21	11	3				1			
Total	2,957	797	1,369	13	274	4	386	55	66	169

Counties having the services of a home-demonstration agent.

State.	Number of agricultural counties.	Counties with services of at least one home demonstration agent.		Counties with services of part time home demonstration agent.		Counties with services of assistant home demonstration agent.		Number of negro home demonstration agents.		Counties served by negro home demonstration agents.	Number of urban agents.	
		Regular.	Emergency.	Regular.	Emergency.	Regular.	Emergency.	Regular.	Emergency.		White.	Negro.
Alabama	67	18	20		26		3	1	6	23	6	2
Arizona	12				5							
Arkansas	75	19	46		6		2		22	22	3	
California	58			7	47							
Colorado	35	1			4						3	
Connecticut	8	1	7								7	
Delaware	3	1	2								1	
Florida	53	31	8		14		2		15	14	8	
Georgia	152	29	79		32			24	1	25	6	
Idaho	39		1		37							
Illinois	102		4		92		1				7	
Indiana	92		16								5	
Iowa	99	1	23								3	
Kansas	105		14								7	
Kentucky	120	19	24		69		2		1		5	4
Louisiana	64	18	17					2	2	8	6	
Maine	16		1		14						1	
Maryland	23	8	11						4	5	7	
Massachusetts	15	1	11		2		5				17	
Michigan	84		13		5						3	
Minnesota	86		3		65						4	
Mississippi	81	16	44		4				3	5	3	
Missouri	114		7		50						8	
Montana	41		10		7						2	
Nebraska	93	2	5		10						3	
Nevada	15		3		2							
New Hampshire	10	2	4		2						5	
New Jersey	19	3	3								8	
New Mexico	26	1	3		5							
New York	57	5	25				2					
North Carolina	100	5	53					1	16	18	6	
North Dakota	51		1		38							
Ohio	75		10								8	
Oklahoma	77	20	28				1	1	2	2	5	
Oregon	35				18							
Pennsylvania	67		2		65							
Rhode Island	5				3		1				1	
South Carolina	45	33	11				24					
South Dakota	66				21							
Tennessee	96	40	10		37						13	1
Texas	250	35	16		3		3	1	2	2	12	2
Utah	28	2	10	2							1	
Vermont	14		5								1	
Virginia	100	23	10				2	3	43	46	8	1
Washington	37		4		20						2	
West Virginia	55	6	7		10		1				1	
Wisconsin	71		7		5						1	
Wyoming	21		4									
Total	2,957	340	608	9	722		49	33	117	170	187	10

Mr. HARRISON. I would like to call your attention to the fact that the amount of $6,100,000 for extension work is exactly the same as the amount asked for by the department last year. The present appropriation of $4,348,400 covers only a portion of the year, and, furthermore, the appointments of these men and women have been distributed throughout the year. Some will be carried on the rolls this year only 2 months, 3 months, 6 months, and so on up to 10½ months. That explains why we need more money next year.

Mr. MCLAUGHLIN. Where do you find that amount?

Mr. HARRISON. At the top of page 32.

The CHAIRMAN. Six million one hundred thousand dollars. Gentlemen, do you desire the work of these various agents discussed? They have been discussed from year to year, and I believe that the

committee knows as much about that character of the work as is necessary.

Mr. ANDERSON. I would like to ask one or two questions.

The CHAIRMAN. Go ahead.

Mr. ANDERSON. In the extension work in the Northern and Western States where do you get your additional county agents?

Dr. TRUE. So far as possible we get men who have had special instruction at agricultural colleges; but we have not been able in all cases to get such men, and then we employ practical men, farmers, who have had successful experience and are known to be men who have kept up with the progress of scientific agriculture. We, of course, have this situation, that many of the men who are preferred in such service are men in the later years of the term covered by the draft, and therefore we have tried to a considerable extent to get men who are older, not subject to the draft. In that class the number of college graduates who can be obtained for this work is comparatively limited, because so many of the college graduates who are over 30 years of age are engaged in relatively large farming operations, which they can hardly afford to leave under present conditions, and for that reason we have to take more largely the best men we can get with practical experience and sufficient knowledge of scientific agriculture to make acceptable agents.

Mr. ANDERSON. In my State we have had an agricultural instructor in practically every high school. In my county, for instance, we have six or seven agricultural instructors in the high schools of the county. Now, practically all of these men have been taken out of their employment and go into county-agent work at higher salaries. That has rather increased our difficulties rather than solved them. Perhaps the situation justifies the spreading out of these men. I think probably it does. But it has rather retarded the progress of intensive agricultural education in my section of the State.

Mr. HARRISON. Mr. Smith can probably tell you some of the difficulties they have experienced in getting men in that section.

STATEMENT OF MR. C. B. SMITH, CHIEF OF THE OFFICE OF EXTENSION WORK IN THE NORTHERN AND WESTERN STATES, STATES RELATIONS SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE.

Mr. SMITH. We have drawn considerably on the schools in Minnesota. The teachers of agriculture have been attracted to the county agents' work because this gives them a broader field of activity, and the work is largely among mature men. In this war emergency they can thus do most toward increasing food production. And we think their work in the agricultural high schools gives them good training for county-agent work.

Mr. ANDERSON. Of course, in our State the agricultural instructors do practically the same kind of work that the county agents do. The only difference is that where we had five or six or a dozen we now have one.

Dr. TRUE. Your teachers are employed only for part of the year?

Mr. ANDERSON. Most of our teachers continue through the entire year, and do a character of work that the county agent does during

the summer months in a more limited locality. But it is much more intensive work than it is possible for a county agent to do.

Mr. SMITH. That depends upon the organization of work. If the teacher in the school has regular school work to do and then does outside work, he can reach part of the people; but we find that he does not have opportunity to bring the farmers of the county together from time to time and work out with them a plan of agriculture for that county. They have a part in each community. The work of the high-school teacher may be more intensive over a small area, but it does not comprehend a large plan for the whole county.

Mr. ANDERSON. Do you use the farm bureau organization?

Mr. SMITH. Yes, sir.

Mr. ANDERSON. Organizing farm bureaus?

Mr. SMITH. Just as rapidly as we can.

Mr. MCLAUGHLIN. You are not able to follow that down, are you, when you are selecting these men in a hurry for special work?

Mr. SMITH. That is a part of the story of the year. We took practically the first three or four months of this year in organizing counties, explaining this work to farmers, organizing farmers and getting the farmer back of the work. We wanted the cooperation of those farmers. We did not appoint many agents during the first three or four months but since then we have taken on practically 700 additional county agents, with a total number of county agents at this time of about 1,075, one to a single county. Then, in addition to that, we are covering 200 counties with 75 district agents. In case a man works exclusively in one county we place him there on condition that the county contributes financially to his support and that there is a substantial farmer membership in the farm bureau organized in support of the work.

Mr. MCLAUGHLIN. I suppose in this emergency work you did not wait until the county would contribute?

Mr. SMITH. There were two things to be taken into consideration in this county-agent work. One of the first and most important considerations was that it was practically the same kind of work that is being developed under the Lever Act. It fits into that scheme, and we wanted to organize it in a way that would continue and further that work. We have found that that is a very effective way of doing the work in any community. It takes a little longer at the start, but you have all of your farmers interested, all of them contributing their part to it, whereas if you put a man in a county—I saw the effects of that in Michigan in some of the counties recently when I was up there—if you put a man in the county without farmer backing and he comes from the college, they look upon him as a college man and don't feel the same interest in him that they do when they themselves have the work explained to them, when they have had the chance to help organize that work and select the agent. I found in Ottawa County the supervisors had put the matter to a vote in that county.

Mr. MCLAUGHLIN. Vote of the people?

Mr. SMITH. Yes. Now, that county agent had practically no farm-bureau membership. He had just a few officers behind him, so he was put in the position of going about urging the people of the county to maintain county-agent work, whereas with a farm bureau he would

simply have gone along about his business. The farm-bureau member would have handled the situation.

Mr. McLaughlin. The general plan you speak of is the regular plan and a very good one I should think, but I had supposed that you had quite largely departed from that owing to this urgent need.

Mr. Smith. No, we have not; and more than that we have tried to secure the same high grade men that we had before and we have been unusually successful. I think that fully 90 per cent of the men have had good training in the science and practice of agriculture. We shall start in in July with a magnificent corps of well-trained men and the work well organized in most of the counties.

Mr. Haugen. I would like to ask a question or two about this organization work. Is it the practice of the department in organizing to send out men into the country soliciting contributions from house to house to make up the funds for this work in the States?

Dr. True. I do not understand that that is the fact. Mr. Smith can answer that question.

Mr. Haugen. Is it a fact that the department sends out men to solicit funds from house to house for the organization of this work?

Mr. Smith. No; it does not. The leader of this work in the State may go to the county and explain to the farmers what this work is, showing what funds are available for it. There are not enough funds to pay for this work in its entirety in every county in the United States, but in case the farmers of the county can help support it financially, then a man may be employed cooperatively with them and put into that county to give them his whole time.

Mr. Haugen. And to encourage them and solicit them to contribute the funds?

Mr. Smith. Yes; the State leader encourages the county to contribute funds.

Mr. Haugen. Now, what is the expense of this organization? Does the expense of this organization exceed the amount of one-half? Would it not be better to pay the money on the start, from the Treasury, to pay the agents rather than to employ a large amount of money in paying people to go over the country from house to house encouraging the people to contribute to that work, to enter into the work, which they frequently do very reluctantly?

Mr. Smith. No; I do not think so.

Mr. Haugen. What is the expense of this organization?

Mr. Smith. For what?

Mr. Haugen. For organizing an ordinary county?

Mr. Smith. It takes usually the time of one man—the farmers volunteer their efforts—at the maximum, two or three weeks.

Mr. Haugen. I will give you my experience. When I was at home during the holidays last December a gentleman came to town and stated that his purpose was to organize. Along about, I think it was, in March I received a letter asking me if I would take a $5 share to help this good work along, stating that about one-half of the funds had been secured. I take it from that that at least two men had spent at least two months' time in getting one-half of the funds, which would be how much—$500?

Mr. Smith. I will explain the peculiar situation in Iowa. Iowa——

Mr. Haugen. But I want to get at this. Am I right in this?

Mr. Smith. The $5 average for membership is right in Iowa.

Mr. HAUGEN. How about the situation there as I have stated it?

Mr. SMITH. I can not tell you about that county, but the county governments in Iowa, as a general rule, do not contribute a cent in support of the farm-bureau work. Therefore all of the work in Iowa has been performed on the basis of the farm-bureau membership of from 300 to 800 farmers, who contribute to the support of that work. It is about the only State in the North and West where the county as a political unit does not contribute funds in support of the farm bureau.

Mr. HAUGEN. Are the people of Iowa contributing all of it, then?

Mr. SMITH. No; I do not quite follow you there. The department and the college and the people in the country cooperate to finance this work. The membership fees in Iowa furnish some of the funds for the salaries and expenses. Some of the funds for the salaries come from the college of agriculture and some from the Federal Government.

Mr. HAUGEN. I understood you to say that it was not financed by the country.

Mr. SMITH. It is not financed as a political unit by the county.

Mr. HAUGEN. How much does the Government pay, how much does the county pay, and how much does the college pay?

Mr. SMITH. On our regular funds the college usually pays $600, and the Federal Government pays $600, and the county pays the rest of it. On the emergency work it varies to meet the needs of the various States. Stated in a broad way, the States are contributing about one-third of the cost in support of this emergency work.

Mr. HAUGEN. How much are these organizers paid a month?

Mr. SMITH. The overhead organizers at the college; that is, the leaders of the county agent work, are paid about $2,500 a year.

Mr. HAUGEN. $200 a month?

Mr. SMITH. Yes.

Mr. HAUGEN. Now, if at least three or four months at $200 a month are spent in getting half of $600, would it not be better to pay $600 out of the Treasury in the first place? As I stated, I do not know the exact amount, but I know according to the letters received there were two men engaged in that work in that particular county. They had been there from December up until March.

Mr. SMITH. Let me show you the situation in Iowa. We had in Iowa probably a leader and four assistants. There are 99 counties in Iowa, and every one of those counties was organized.

Mr. HAUGEN. Do you contend that four men did all of that?

Mr. SMITH. Four men, when they are properly organized, could do that.

Mr. HAUGEN. According to the correspondence I had, two men spent at least half their time in one county.

Mr. SMITH. I think that is only a part of the story.

Mr. HAUGEN. You secured an excellent man, a man whom I know well, and he did excellent work; but I wanted to get at the policy and what is being done.

Mr. SMITH. In Iowa we started last August with about 22 regular county agents, and we now have an agent in every county in the State.

Mr. HAUGEN. I think if you will look up your statement about your men there you will find that you must have employed more than that, because I have heard of them in different sections of the State.

Mr. SMITH. I want to show you this map of July 1, 1917, first, and then this other map showing the present condition.

Mr. HAUGEN. I will take your word for that. It is not worth while to take up the time of the committee to exhibit maps here.

Mr. SMITH. Just in a general way, this is the situation in the country-agent work. This map shows the condition in the Northern and Western States in July last.

This other map is up to date, and it shows that Iowa has only one county that has no agent, and that is the way the work stands to-day. This first map represents what we started out with last July, and the second map represents the way it is to-day.

Mr. HAUGEN. What I wanted to know is as to what you are doing and what is the expense of organizing these counties; and I have asked you, would it not be better to pay the whole expense for the county rather than to pay twice the amount in organizing it?

Mr. SMITH. You have got that altogether too high.

Mr. HAUGEN. I am asking you the question. I am telling you what I know about it.

The CHAIRMAN. Let me see if I get this. I have an idea that you and Mr. Haugen are talking at cross-purposes. You do not send your State agent, for instance, into the county of Lexington, S. C., to go around in the capacity of a speaker asking for contributions, do you?

Mr. SMITH. Not at all.

Mr. HAUGEN. You did that in Iowa.

Mr. SMITH. The farmers themselves do that. Usually our agents go into the county and interest a group of farmers in that county, and those farmers then solicit the membership.

Mr. HAUGEN. I beg your pardon, but the letter received by me was from the bank——

Mr. SMITH. Yes; not from our agent.

Mr. HAUGEN. The letter stated that these two gentlemen—it gave their names—had called at the bank and stated that one-half of the amount had been subscribed, and asked me if I would take a $5 share, to which I responded that I would most cheerfully. This was about the 1st of March. I know that they were there when I was home for the holidays, in December. One of them was canvassing then, and he told me what his plan was—that he was going out to organize and get the money. I was surprised at the time consumed in organizing a small county with only 12 townships, and they getting only one-half of the subscriptions needed in the time consumed.

Mr. MCLAUGHLIN. I have never understood that the man who was to be employed as county agent went into a county and solicited money out of which he was to be paid.

Mr. HAUGEN. No; not the agent, but the special agents. I served in the legislature with one of those men, and I am not finding any fault with the men you sent, or the work there. They are high-class men and were doing good work.

Mr. MCLAUGHLIN. In Michigan a State agent goes to a county, usually—not always—by invitation of the board of supervisors, to organize the farmers and to tell them what kind of work the county

agent will do and how one can be secured, and perhaps uses arguments calculated to induce them to take part in the work and secure the employment of a county agent; but I have never learned that the county agent himself, the one who was later employed, went into a county and undertook to raise money out of which he himself was to be paid.

Mr. HAUGEN. Well, the gentleman is a high-class man. I served with him in the legislature. He told me he had been drafted into the service to organize and solicit the money.

Mr. MCLAUGHLIN. He was a local man, was he not?

Mr. HAUGEN. He was from the southern part of the State, probably 150 miles from there.

Mr. HARRISON. Certainly, if anyone has been sent out to solicit subscriptions, the Secretary did not know about it; if he had, he would not have sanctioned the practice.

Mr. HAUGEN. I am not taking exception to what was done, but I think we might save money by paying the $600 out of the Treasury rather than to pay $1,000 or $2,000 for organizing.

Mr. HARRISON. It is not so much the soliciting of subscriptions as it is of getting the farm bureaus organized and having the farmers realize that they have a part in the work and that a part of the responsibility is theirs. Of course, we can go ahead, pay all the salaries and expenses of the agents—and we are doing so in a very few instances where the conditions are peculiar—but the principle of the Smith-Lever Act is to get the communities themselves to take an interest in the work, and the best way to do that is to have them financially interested in it.

Mr. HAUGEN. I hardly think that it is the purpose of the Smith-Lever Act or any other act of Congress that the Government should set itself up as the guardian of the farmers. I think the farmers have some intelligence and have been doing fairly well and are in a position to determine for themselves what is or is not for their good and whether they want to make an investment or not. But in this time of war, in this emergency, I do not want to interfere with the work at all; I am only questioning the method of the expenditures. I do not think it is good policy to go out and spend so much money simply for organizing. I do not know what the amount was, but according to your statement it was $200 a month they must have spent, at least, in three months between them; if so, $200 a month, which makes $600; and they had gotten only half the necessary subscriptions.

Mr. OVERMYER. Was he on the Government pay roll at the time, do you know?

Mr. HAUGEN. As I say, I was told of this by this gentleman. That is all I know.

Mr. OVERMYER. He may have been paid by local interests.

Mr. HAUGEN. No; he told me he was drafted into the service. He is a very capable man; and he was not in it for the salary. He was doing it as a patriotic duty.

Mr. HARRISON. We have secured a good many men by urging them to take up the work as a patriotic duty. The farmers in the different localities usually are not in a position to determine whether or not they want the work until they have had an opportunity to see what

it is and have had explained to them all the benefits that have accrued to other counties from it, the method of organization, and so on.

Mr. HAUGEN. They have had splendid men there, and they did splendid work. I am not finding fault with the service.

Mr. HARRISON. I think you will find the situation as stated in Dr. True's testimony last year. Dr. True stated that it may be necessary sometimes for the department to pay all the salary of an agent; but I think that the committee was very much interested in having the counties come in and contribute to the advancement of this work as rapidly as possible.

Mr. MCLAUGHLIN. I have some knowledge of the way the work is done in Michigan. A very capable man was selected there, Dr. Eben Mumford. That man is usually selected by the State college of agriculture, and the Department of Agriculture here, and by invitation, usually—uniformly, I believe—he will go to a county and appear before the supervisors or a large meeting of the farmers, and explain to them the work that the county agent will do, and the board of supervisors will later take action, and if they act favorably they will contribute the amount of money which, together with the $600 available from the State and the $600 available from the Federal Treasury, will meet the salary and the expenses of the county agent, it being necessary, you know, in most cases for the board of supervisors to appropriate from $1,600 to $1,800 a year. Then a county farm bureau is organized among the farmers, and the State agent suggests to that farm bureau the names of suitable men for county agents, and one of those men will go and appear before the county farm bureau and he will be looked over, submitted to a kind of examination, and if he is found suitable in the opinion of the farm bureau he is employed, and if not—and I know of cases where they have not been thought suitable and two or three men had to be suggested to them and those men went in turn and were looked over by the county farm bureaus—some other man is sent, and finally one is selected. That is the general plan that has been carried on in Michigan, and it seems to me a very proper way of doing the business.

I had supposed, though, that in this emergency they could not go through all that formula, and when it was necessary to have a county agent that the department would select him or the college would select him, and he would be sent to the bureau, and perhaps paid altogether out of public funds provided by the college and the department; but I think that the effort ought to be made along the other line first, to secure action by the county and organization of a county bureau, and appropriation by the county authorities. It would be much more satisfactory.

Mr. SMITH. That is the point of view we have taken.

Mr. HAUGEN. The situation in Iowa may be different from that in other States, and that may be due to the fact that the people of Iowa are pretty prosperous. They have the soil, and are intelligent as well. An effort has been made to encourage this work. I know in some counties they have been at it three years. It takes a long time to organize this work, and it is a question whether we are justified in spending so much money to encourage the work. It may be that it can be better done by appropriating the money direct from

the Treasury for the work rather than sending people out in this way.

Mr. HARRISON. You might be interested in knowing that Iowa was the first State to form a farm bureau organization in every county in the State, and the Secretary of Agriculture sent a telegram of congratulation to the director on that. Is not that true, Mr. Smith?

Mr. SMITH. Yes.

Mr. HAUGEN. Well, Iowa was the first to go over the top in subscriptions to the liberty loan, and it seems first in everything. [Laughter.] It is credited with the lowest percentage of illiteracy in the United States.

The CHAIRMAN. Does that apply to its representation in Congress also?

Mr. MCLAUGHLIN. There is no doubt that Michigan in many respects looks to Iowa and tries to reach its standards as an agricultural State.

Mr. SMITH. Did you understand me to say, Mr. Haugen, that it took two or three months to organize a county in Iowa?

Mr. HAUGEN. I said that when I was back home during the Christmas holidays a gentleman was there, and in March I received a letter asking me to subscribe, and stating that only one-half the necessary amount had been raised.

Mr. SMITH. Normally, not three weeks would be taken in organizing the average county in Iowa, unless you take——

Mr. HAUGEN. What is your overhead?

Mr. SMITH. There is the man at the college who supervises this whole work.

Mr. HAUGEN. How many people are soliciting support—subscriptions—those are the ones that I am talking about.

Mr. SMITH. The solicitors, always, so far as I know, are local people, and not——

Mr. HAUGEN. These people were not local men. As I have stated, this man told me that he was drafted into the service for that purpose. I take his word for it. That is all I know.

Mr. SMITH. That is the general principle. Federal agents do no soliciting.

Mr. HAUGEN. I am not criticizing the men. I am simply asking, would it not be better to pay the whole thing rather than to spend the money to have these men go about soliciting? If that is the general practice, I have doubts as to the practice.

The CHAIRMAN. Is there anything further? If not, the committee will stand in recess until 2.30 o'clock.

(At 12.25 o'clock p. m., the committee took a recess until 2.30 o'clock p. m.)

The following statement shows, by projects, the allotment of funds made by the Secretary of Agriculture from the $4,348,400 appropriation provided by the food-production act of August 10, 1917, "for increasing food production and eliminating waste and promoting conservation of food by educational and demonstrational methods, through county, district, and urban agents and others":

Allotment of funds, by projects, under the food-production act of August 10, 1917.

Project.	Allotment.	
	Amount.	Date.
States Relations Service:		
General administration of extension work	$25,000	Aug. 16, 1917
Extension work in the Northern and Western States	3,170,400	Do.
Extension work in the Southern States	1,143,000	Do.
Home economics work	10,000	Do.

AFTER RECESS.

The committee reconvened at 2.30 p. m. pursuant to the taking of recess, Hon. Ezekiel S. Candler presiding.

V.

FOR GATHERING AUTHORITATIVE INFORMATION IN CONNECTION WITH THE DEMAND FOR AND THE PRODUCTION, SUPPLY, DISTRIBUTION, AND UTILIZATION OF FOOD, AND OTHERWISE CARRYING OUT THE PURPOSE OF SECTION 2 OF THE ACT; EXTENDING AND ENLARGING THE MARKET NEWS SERVICE; AND PREVENTING WASTE OF FOOD IN STORAGE, IN TRANSIT, OR HELD FOR SALE; ADVISE CONCERNING THE MARKET MOVEMENT OR DISTRIBUTION OF PERISHABLE PRODUCTS; FOR ENABLING THE SECRETARY OF AGRICULTURE TO INSPECT AND CERTIFY PERISHABLE AGRICULTURAL PRODUCTS, AS PROVIDED IN THE AGRICULTURAL APPROPRIATION ACT FOR THE FISCAL YEAR 1919, $2,368,958.

BUREAU OF MARKETS.

STATEMENT OF MR. CHARLES J. BRAND, CHIEF OF THE BUREAU OF MARKETS, UNITED STATES DEPARTMENT OF AGRICULTURE.

Mr. CANDLER. Mr. Lever is unavoidably detained this afternoon, and he has asked me to preside in his absence. We will take up this afternoon the Bureau of Markets. Mr. Brand, will you please take up that part of the bill and make any statements with reference to the Bureau of Markets that you think it proper to make.

Mr. HARRISON. Mr. Chairman, I would like to call the attention of the committee to the fact that the emergency appropriation for the Bureau of Markets shows a decrease of approximately $155,000. The appropriation this year is $2,522,000, while that suggested for next year is only $2,368,958.

Mr. CANDLER. There is an actual decrease in the appropriation in this bill under these estimates?

Mr. HARRISON. Under these estimates.

Mr. BRAND. Mr. Chairman, these estimates were very carefully made. I believe with the present equipment that with this amount we can do the same amount of work as effectively as under the larger current appropriation—possibly a little additional work in spite of the reduction in the total sum estimated for?

The first line of work under the emergency appropriation is "Market news on fruits and vegetables." The committee is familiar with

our regular work along this line. On account of an increase in our regular appropriation of $50,000 a corresponding sum has been taken from the emergency estimates. At the present time under this particular item of appropriation we are carrying 18 or 20 new market news stations (some of them opened in the very recent past) and about 100 field stations in producing sections. These are in addition to the 12 city and 50 field stations which we originally had under our regular appropriation. These stations now give us a practically complete framework of a national news service on fruits and vegetables. Within the past week an office has been opened in Los Angeles. In the past we have not been able, under our regular funds, to extend our work to the West to any great degree. Under the emergency funds we are able to give not only the West but the South more attention than we have given in the past.

We are about to open offices in Seattle, Fargo, San Francisco, Spokane, Portland, and Butte, Mont. In the South we have, on emergency funds, already opened offices in Memphis, in Houston and Dallas, in New Orleans, in Birmingham, and in Atlanta. There are a few additional places to which we may extend this work, if we can find the men; but we believe that the plans we now have give us a substantial framework for a national service.

As you know, every railroad superintendent reports to us by telegraph every evening the shipments of the previous 24 hours. These telegrams are usually filed between 9 o'clock and 12 o'clock at night, and our night telegraph force receives and decodes and prepares those telegrams so that they are ready to be sent out by 9 o'clock the next morning, and by 11 o'clock most of them have been sent out.

Mr. Lee. Is that for only these particular points or for the entire country?

Mr. Brand. That is for all these points. Our market-news reporters visit the markets in the early morning hours, between 4 and 6 in the morning, and get their reports on market conditions. The transmission of the reports to the markets follows immediately after the receipt of the reports from the railroad superintendents. In this way we give the information from the great markets to the producing centers, and vice versa.

During the previous fiscal year, under our regular appropriations, we conducted 12 of these permanent market stations, as I stated before, and about 50 of our temporary stations in the producing sections. Under the emergency appropriation we have increased the number during the past season to 86 of these stations, which are conducted in the producing sections. We hope to increase the number this year to nearly 150. As an example of this work, we may begin with potatoes at Hastings, Fla. We have two or three employees there covering this news and disseminating it every day. After the potatoes are all harvested at Hastings, Fla., they move up along the coast to, say, Charleston—the trucking section around Charleston. From there they move to the trucking section around Wilmington, and from there on up into Virginia, to the Eastern Shore, and then to New Jersey, and finally this particular group of men will probably end at the appropriate time in the potato season at Presque Isle, Me. Thus we have these itinerant offices, as it were, following the important commercial fruit and truck crop movements

as the season for each develops; and, as I say, we have during the past year maintained more than 80 such offices.

I do not think it worth while to burden you with a statement of what they all are, but they cover Florida, Louisiana, Texas, North Carolina, Arkansas, Tennessee, Virginia, Mississippi, Kentucky, the State of Washington, Oregon, Maine, New York, Michigan, Minnesota, New Jersey, Delaware; practically all of the great shipping sections where they are big car-lot movements. We keep these offices open for a period varying from two weeks to a number of months. Two weeks is rather a short period, but will sometimes suffice. This year we have kept them open as almost a year-around proposition, particularly when dealing with apples, onions, potatoes, and cabbages.

Mr. ANDERSON. How is this information made use of by the trade? Of what value is it to the trade?

Mr. BRAND. It enables the trade to know where to ship, when to order, how much to order, what the prices are, what the supplies are, and in conjunction with the market-inspection work, what the qualities are. They use it as a basis for their prices and for their buying. In fact, it is now practically a fixed part of their business operations.

Mr. ANDERSON. Is it under this part of your work that you certify the quality of fruits and vegetables?

Mr. BRAND. No; that comes under the market-inspection item. We discuss that a little later.

Mr. ANDERSON. This is a new service, pure and simple?

Mr. BRAND. This is a new service, pure and simple, yes.

Mr. CANDLER. For as long as I can recollect, cotton merchants have gotten telegrams early in the morning as to what the market was in Liverpool and in New York, and they have fixed the price of cotton on that in the local markets.

Mr. BRAND. Yes.

Mr. CANDLER. And under this provision you send out and give prices as is done for cotton on each day for immediate use?

Mr. BRAND. Yes. And your strawberry growers, Mr. Chairman, for instance, will not sell their strawberries until these market bulletins, which they call the Government bulletins, are posted upon their bulletin boards. It gives them information which enables them to sell to the buyers in those great sections upon practically an even-handed basis. They can not be told that the prices are off in New York or somewhere else, or that there is a glut in this or in that market, because this service gives them the absolute information as to what the supplies are and what the prices are in all these markets.

Mr. CANDLER. I was just going to ask you if you did give information as to what the prices were on certain products.

Mr. BRAND. Yes; the reports show the number of cars on the tracks and the number of cars broken and being unloaded. They are given all the information that they require in order to determine what the situation is in detail.

I recall that one gentleman, Mr. J. L. Slattery, of 177 South Water Street, Chicago, Ill., who is a very large onion dealer, stated to us that before our service was perfected he himself paid, for his one firm, $1,000 a month for the collection and transmission of market information. He said that even at that he did not have a service which was half as good as we were able to furnish.

Mr. ANDERSON. To what extent has the movement of perishable foods been disturbed by transportation conditions?

Mr. BRAND. In the winter time it was considerably disturbed. At the present moment the movement is almost normal. In fact, it is rapidly becoming normal. I had the question up with the representatives of the railroad administration yesterday, and am informed that it has improved with marvelous rapidity.

Mr. ANDERSON. This is rather outside of your sphere of action, but it has sometimes occurred to me that the coal situation might be considerably relieved by some such system as you have in this market news service, applied to the location particularly of cars, with a view to seeing that they are promptly loaded and unloaded, and finding out where delay occurs, and things of that sort.

Mr. BRAND. Yes; I suppose it could be applied to other things. We are applying it in perishables. Just as a concrete illustration, at this moment one of our men is the joint representative of the Department of Agriculture and the Railroad Administration in the Texas onion-shipping territory. He receives words from all the growers every day from each of the centers as to just how many cars they propose to load. He tages up with the railroad the securing of those cars, and we place the required number of cars in each of those sections, because they have designated him as their representative by their own action, in order that the distribution of cars may be fair and just. They realize that with the existing car situation they have got to stand the brunt of things with the rest. They also realize that if every section is allowed to vociferate, the one that vociferates the loudest is going to get the most cars, and it is not going to be to the best interests of the distribution of our onion supplies. As a result they have asked us to take charge of the apportionment of empties, and we are apportioning the cars to each of those sections.

Mr. ANDERSON. I know that a similar service was worked out in the State of Washington on the coal situation last winter, and it worked very satisfactorily, and I do not see any reason why it could not be applied to the entire United States.

Mr. BRAND. Certainly we have done so in this work, and it is a very practical method. So far as perishables are concerned, the railroad administration is at present working to perfect a solution for these problems. We are in conference with them, and they are utilizing the experience that we have been fortunate enough to gain in this matter.

Just as an illustration—Mr. Anderson asked how this was working in operation—I have here a letter dated March 30, 1918, from a grower, Mr. W. J. Odom, at Fort Myers, Fla., in which he says:

> I have a crop of grapefruit, and from the market reports I was able to sell a carload of fruit that netted me $2.18 a box on the trees, when I could only get $1.50, offered me by the buyers.

It is surprising what reliable information will enable men to do when they are trading. The county agent at West Palm Beach, Fla., in a letter dated April 1, 1918, says:

> Because of the various indirect ways in which the Market News service helps the farmers it is difficult to state in dollars and cents just how much help the mixed-vegetable report has been, but will say that in this county alone it has certainly done several thousand dollars worth of good. Particularly in the Lake Okeechobee section, which is so far removed from rail communication, past

experience has shown that heavy loss would have resulted this year through irresponsible rumors, which upset the growers' confidence, had not your news service reached them.

Also, there is a tendency to reduce acreage because of uncertain marketing facilities, which often make the crops unprofitable, but the news service has lent confidence because the information given makes marketing more certain and distribution easier.

These are just indicative of the kind of letters we receive. A gentleman at Jourdanton, Tex., wanted to buy some seed potatoes, and the best offer he could get was 6 cents a pound. He got hold of our Market News report, and found there were plenty of seed potatoes to be had at $4\frac{3}{4}$ cents a pound, and he succeeded in securing his at $4\frac{3}{4}$ cents.

Now, on the fruit and vegetable service, I suppose we have thousands of testimonials of just that kind. I do not think it is necessary to read them. Here is one man, Mr. John C. Burns, the manager of a large commission firm at Minneapolis, who says:

You certainly do get out some market report. When do you sleep? Keep my name on your list. It's my prayer book. Every morning I read every line of it.

That is the way the trade has come to feel. Very large dealers have told me that because they can get our market information in practically every section of the country they can do their business almost as well out in the field as they can at their offices in New York. This particular gentleman was from New York. He handles two or three thousand carloads of fruit and vegetables a year. I just read these as an indication of the kind of results that are following from that work. Some other letters follow:

The following is an extract from a letter received from Fred W. Volg, grower of cabbage, Mission, Tex., March 28, 1918:

"When local buyers were paying only $20 per ton for cabbage I noticed through your bulletin that crated cabbage was bringing about $40 per ton above expense of crating. So on March 6 I crated a carload and shipped it and received $45 per ton f. o. b. Mission above crates, for which I was allowed 40 cents per crate."

Capt. John Springer, Q. M. R. C., quartermaster, located in Wilbur Wright Field, Fairfield, Ohio, writes on April 8, 1918:

"The market reports you are furnishing this office are very valuable in assisting the quartermaster to make purchases of subsistence supplies locally for troops at this field."

The following is a resolution drawn up and signed by 30 or more representative men in the vicinity of Hastings, Fla., on May 16, 1917:

"We, the undersigned shippers, dealers, and growers of potatoes and representatives of railroads handling out of Hastings, Fla., wish to express to you our appreciation of your daily market reports and of the great service same has been to all and most respectfully request a continuance of said service next season."

The following, signed by a number of men in and near Rochester and Lockport, N. Y., was received by Mr. Brand on October 17, 1917:

"We, the undersigned dealers, shippers, growers, and carload-lot producers of perishable freight, located in western New York, wish to take this opportunity of expressing to your department the heartfelt appreciation for the earnest and untiring efforts of your Rochester representative and his office in behalf of the interests impartially of shippers, growers, and dealers in his work the past season to relieve the most disastrous car shortage ever experienced in New York."

The Potato Growers' Association of the Yakima Valley, located in Toppenish, Wash., through its secretary, W. B. Meyers, expresses its appreciation as follows:

"I am glad to see your department getting down to real efficient business on behalf of the farmer. The information we are receiving is something that has been looked for by the farmer for years, and we can not say too much for this

branch of service as it is of great assistance to us. No farmer could ever say naught upon taxation for the maintenance of such an office, for we feel we are being benefited and do not begrudge money spent in this way."

A similar experience has been had with reference to other lines of news-service work.

The next item is "Market news service on live stock and meats." Under this we are furnishing a service which livestock producers and shippers have never enjoyed in the past. The only people in the world who were able to enjoy such expensive and valuable information were the big packers. These telegraphic reports put the commission man and the representative of the producer in the market on practically the same basis, a condition which only a few years ago was enjoyed by only the big packers. They are very, very appreciative of the service and have requested its great extension. At the present time we have six permanent stations under our regular appropriation. By the end of the fiscal year there will have been established 12 or 13 additional stations under the food-production act, whose renewal estimates we are discussing to-day.

Mr. McLaughlin. What is a station?

Mr. Brand. It carries a different meaning in the different products and in the different sections of the country. A station in New York will consist of possibly three or four workers who go through the market at 6 o'clock in the morning, or at whatever time the market opens in the different cities, who visit the essential elements of the trade for information as to prices, who get from the railroads the information as to receipts, unloads, and things of that sort. For instance, in New York we have a regular arrangement whereby at a certain hour every morning a certain telephone operator on each line is assigned to us by each railroad. They have blank forms which we have prepared for them, showing for each of the carriers the receipts and shipments. These are read over the telephone to our people and are immediately put out in mimeograph copies. By 8 o'clock in the morning our men are distributing this information.

Mr. McLaughlin. How?

Mr. Brand. By messenger, by mail, and by the answering of calls of inquirers on the telephones. Many persons come in and get the bulletins themselves. In the winter I happened to be in Chicago when the report was about due, and several men were in line waiting for the report to be released. They are very anxious to get it in order to assist them in their trading. That is particularly the typical city station.

To describe a field station, I will take a case like that of our station at Rocky Ford, Colo., where we report what we call our "in and out" movement of live stock. The Rocky Ford district in Colorado and the Lancaster district in Pennsylvania are two great feeding areas. About 130,000 lambs and 25,000 cattle were fed in the Rocky Ford district this past season, while about 75,000 cattle were finished in the Lancaster district. Therefore, we have offices there through which we learn every day how many head are coming in to go on feed and how many have been finished and are going to market.

Mr. McLaughlin. How many men have you employed at the Rocky Ford station?

Mr. Brand. We have there one man in charge, a stenographer, and a messenger. The work necessitates, of course, a great deal of travel

through the country, visiting ranches where the feeding is taking place, determining how many cattle are going out, and how many are coming in.

We believe that in a relatively short period this work should result in our being able to tell how much live stock is coming on the market all the way from one to several months before the time it is actually shipped.

Mr. McLaughlin. How many men are employed in doing this traveling and getting this information and making these estimates from this one station, Rocky Ford?

Mr. Brand. It is all handled by one man in a Ford automobile.

Mr. McLaughlin. I would not think that he could cover much of an area, visit many ranches, and take care of the office work.

Mr. Brand. He does not have much opportunity to take care of the office work, as a matter of fact. He has to leave that to the stenographer. When it comes to the work he does, you are able, with a Ford, to do a wonderful lot of things.

Mr. McLaughlin. What is that man paid?

Mr. Brand. The man who was in charge received $1,800. The man now in charge gets $1,200. Most of these men are not highly paid.

Mr. McLaughlin. These field stations are all equipped, as to the employees, about as the one spoken of?

Mr. Brand. Yes.

Mr. McLaughlin. And how many are there?

Mr. Brand. We have a total of 106 project offices. They range from 1 man up to possibly 9 or 10 men. They vary greatly as to the number of employees. In the case of the traveling field stations they vary greatly. For instance, in the Laredo onion field, where about 8,000 or 9,000 cars are moved in less than two months, we are compelled to keep men at two or three different points. Likewise we have to have a transportation man to handle this car-allotment work; so that there, I believe, we have as many as eight. That is the largest number I recall in any case.

It is regrettable that the onion carry over from last crop is so great that the possibility of loss for the early onion crop is really serious.

Mr. McLaughlin. You speak of this information that is given out in these different ways and to so many people. What parts of it, if any, are charged for, and how?

Mr. Brand. We have no authority to charge for anything, but we make them pay all of the tolls on their telegrams and things of that sort. We do not send telegrams at the Government expense to any except Government employees or persons who are rendering a definite service to the Government in disseminating information to other persons. For instance, take the case of the Bank of Starke, in Florida. There the bank had the printing done and got our report out, and actually distributed it every day. Of course, in this case we sent it to the bank without charge. But, generally speaking, if persons want any of this information by telegraph they are obliged to pay for it.

Mr. McLaughlin. Or by telephone?

Mr. Brand. Yes; by telephone. Yes; our long-distance tolls are relatively very small, because we reverse the charges if the other fellow wants the information, and often they want it very badly, so

badly that they are willing to go to any expense to get it. On the day we release our storage reports, for instance, persons frequently call up from New York for the information. They require this information in their business.

To return to the live-stock item. Take these feeding reports; there are several other correspondingly important feeding territories in addition to Rocky Ford and Lancaster that ought to be served in the same way, particularly the Flint Hills country in Kansas and the Osage country in Oklahoma and the Big Basin country in Montana and Woods County, Ohio, and one or two other big feeding territories which are great, recognized reservoirs for live-stock feeding. We want to serve as many of those as we can, and we propose to extend the work with the funds that are provided for in this particular estimate.

Mr. McLAUGHLIN. Is there any particular need of the extension on account of the war?

Mr. BRAND. Yes; with reference to products generally there is very great need for extension in all of this work on account of the war for numerous reasons. For instance, one very great reason is the present regulations do not permit people to keep on hand, generally speaking, more than a 30 days' stock of various things. That means that many products are held back in the hands of the producers to an extent that they never have been held in the past.

Mr. McLAUGHLIN. And more frequent buying?

Mr. BRAND. Yes; it results in more frequent buying, and the producer has to hold for a longer period. Whereas, generally speaking, he markets his product and forgets about it, now much of it is held back and marketed gradually.

Mr. McLAUGHLIN. In a general way, do your inquiries come from producers or dealers, middlemen, etc.?

Mr. BRAND. From all. Just before you came in I read several letters from producers indicating the use and value of the service to them of the fruit and vegetable reports and their desire for their continuation.

Mr. McLAUGHLIN. If you have answered that question, do not repeat it.

Mr. BRAND. If the committee desires, I will put into the record a very small selection of six or eight letters with relation to the live-stock and meat service. I could probably illustrate this point better in this way than in any other by selecting, for instance, letters from a producer to the president of a State farmer's institute, a commission merchant, and from some other elements, as showing the interest that the different branches of the trade take in those news services. If you so desire I would be glad to do that. They will be very brief and will not take up much space.

Mr. CANDLER. Very well; you may do that.

(The letters referred to follow:)

In your reply refer to H-31-B.
Subject: Live Stock and Meat Trade News.

WASHINGTON, D. C., *February 15, 1918.*

Mr. CHARLES J. BRAND,
Chief Bureau of Markets, Department of Agriculture,
Washington, D. C.

DEAR MR. BRAND: I have read with profound interest your review of the live-stock and meat trade for the week ending February 13 and take this occasion to

congratulate you upon the means you have adopted for conveying to those interested the comprehensive yet concise items of pertinent interest incorporated in your weekly review.

Yours, faithfully,

U. S. FOOD ADMINISTRATION,
By F. L. BROOKS.

SAN FRANCISCO, CAL., *January 22, 1918.*

CHARLES J. BRAND, Esq.,
Chief Bureau of Markets, Washington, D. C.

DEAR SIR: Your most interesting literature is just at hand, and the information contained in your daily reports would be of inestimable value to us.

Might we request, therefore, that you kindly have forwarded to us all reports concerning receipts at stockyards, wholesale prices, carload destinations, report of meat trade conditions, and any other information which your department is in the habit of disseminating and which might be of interest to the members of our association.

With many thanks for your cooperation, we beg to remain,

Very truly, yours,

CALIFORNIA CATTLEMEN'S ASSOCIATION,
By DAVID J. STOLLERY, *Secretary.*

CLAY, ROBINSON & CO.,
LIVE-STOCK COMMISSION STOCKYARDS,
Fort Worth, Tex., April 4, 1918.

MR. CHARLES J. BRAND,
Bureau of Markets, Washington, D. C.

DEAR SIR: I wish to take this opportunity of expressing my appreciation for the information given out by the Bureau of Markets.

It is very valuable to those interested in live stock. In our case we have Clay Robinson purchase about 1,000 pigs each month, which are either fed out or sold north as stocker pigs.

Our pigs are handled in Kansas, Illinois, and Iowa, a few in Missouri, so it is essential to keep in touch with conditions.

In our marketing of fat hogs we have been able to sell on "high spots" by the aid of the Bureau of Market reports. The destination of hogs loaded is of special benefit. The Market Bureau is to be highly commended.

Yours, truly,

J. N. HUFF.

FORT WORTH, TEX., *April 6, 1918.*

MR. CHARLES J. BRAND,
Chief Bureau of Markets, United States Department of Agriculture, Washington, D. C.

DEAR SIR: The Bureau of Market Information, as established at the Fort Worth stockyards, is of value to the commission houses, principally for the reason that it gives information to our salesmen and our customers as to the beef, pork, veal, and mutton markets "down East."

This "down East" market has heretofore been considered secret information. Coming through the packers almost exclusively. As the packers base their market on live stock on the hoof, largely by supply here and demand at the coolers, the selling agents of the producers (commission men) were not as well informed as the packers with whom they were forced to trade on all killing classes of live stock. In other words, the salesmen at this market are now on an equal footing with the buyers, so far as the supply and demand of the commodity is concerned.

The packers try to keep up with the range and feed lot supply "to come" by regular inquiry at the commission houses as to probable future shipments, also through their stockyard traveling solicitors.

Should the Government information be discontinued, our "down East" market information would come wholly through the packer buyers. The work of your agent at this point has been most thorough, and for reasons above stated, of considerable value to the producer through his commission house.

Most respectfully.

GEO. R. BARSE LIVE-STOCK COMMISSION CO.,
By WILL H. BARSE, *President.*

ILLINOIS FARMERS' INSTITUTE,
Genesco, Ill., December 28, 1917.

DEPARTMENT OF AGRICULTURE,
Washington, D. C., Attention Charles J. Brand.

GENTLEMEN: I have been getting your reports from the Bureau of Markets, Chicago, for past three months, during that time I have marketed over 2,200 head of sheep, beside some cattle and hogs, and I feel it a duty to let you know that I believe you have a service here that is of real benefit to the feeder, he gets a report on the feeder stuff shipped back to the country, or sent from other points; especially I note this in your report of December 20, also your dressed-meat report. I am very much pleased with the service coming from your Chicago office, and it seems to me one of the very best ways the feeder can be advised, and it is public money well spent, in my judgment.

Wishing you success, I remain,

Yours, truly.

FRANK S. HAYNES.

INDIANA SILO CO.,
Anderson, Ind., November 3, 1917.

I am inclosing a card for your files on which I state that I breed, raise, and fatten [illegible] in a big way, but carry something like 100 head in an intensive way on my Indiana farm. I might say that our silo company is the largest manufacturer of silos in this country, and are therefore interested in the production of beef and dairy products through our many customers over the country.

I would very much appreciate being put on the mailing list for anything regarding the production and price of beef and milk products, also the market on hogs. Am more particularly interested in the movement and prices of live animals than the finished meat products.

Thanking you in advance for this daily bulletin service.

FORT WORTH, TEX., *July 11, 1917.*

We are very much interested in the daily market bulletin which you are favoring us with, and feel it is of great value and benefit for the purpose it is intended. It gives us a good idea as to how things are in the East, and we feel that our salesmen can keep in closer touch with the situation in this way.

We are keeping it prominently before the public, and have a special board upon which it is kept, so that everyone can see it who enters the office.

CASSIDY SOUTHWESTERN COMMISSION CO.,
C. M. GALLOWAY, *Assistant Secretary.*

CANADIAN PACIFIC RAILWAY HOTEL SYSTEM.

I am much obliged to you for the reports which you are sending me, including those on "Meat Trade Conditions," "State Origins of Live Stock Loaded," "Destinations of Live Stock Loaded," and "Wholesale Meat Prices."

I do not know whether your department publishes a weekly statement of the above information; if so, I should prefer to have it to having them sent to me daily.

I am studying the whole of the meat situation in the west of Canada with a view to possible supplies to the European markets, and all the information which you are now sending me is therefore extremely useful. As soon as I have completed my investigations here, I propose to visit the Western States of the United States of America with the same object.

M. F. KINDERSLEY.

Mr. HAUGEN. Did I understand you to say that you have men traveling over the country gathering that information?

Mr. BRAND. Yes.

Mr. HAUGEN. They go from one ranch to another?

Mr. BRAND. I was describing particularly the Rocky Ford station, which handles "in and out" shipment information on live stock.

Mr. HAUGEN. Do you mean that they go all over the country, in these different localities, and count up the cattle? What is the purpose of it?

Mr. BRAND. They gather this information so as to be able to determine how many cars are going to be shipped in the next week or two weeks. They have certain territories and periods that they cover, because they can not be at every place every day. They have to plan periodically and go the rounds, and then start over and do it again.

Mr. HAUGEN. What is the object of that?

Mr. BRAND. To find out how many cattle are going to be marketed in that period; so that the great central markets will be advised, and so that the producer will be able to distribute his product more evenly throughout the time.

Mr. MCLAUGHLIN. Have you checked up to see whether the advance information you get is verified by actual shipments?

Mr. BRAND. Yes; we keep track of that. In addition to our Rocky Ford office we have our live-stock offices at Kansas City, Chicago, Omaha, South St. Paul, Fort Worth, and other places, and they are in constant touch. Those offices are connected by leased wires, and just the moment that the information is secured at one place it is in hand at the others and is distributed in the market and at the shipping points as well.

Mr. MCLAUGHLIN. My reason for asking that is that either you did not understand me or I did not understand your answer. Your man goes out and gets information as to shipments that are going to be made two weeks hence. Do your records show whether the shipments were made when the appointed time came for them to be made?

Mr. BRAND. Yes; our reports show that, and we check up with a degree of accuracy that never has been secured in the past. In the past they judged wholly by the number of cars ordered. They estimated what the shipments were to be by the number of live-stock cars requested. We found that those figures were sometimes 250 per cent out of the way.

Mr. ANDERSON. They could not be 250 per cent less very well.

Mr. BRAND. No. They could be 250 per cent, though. Quite commonly shippers will ask for a much larger number of cars than they could possible use.

Mr. HAUGEN. Is it not a fact that you have had to ask for a dozen cars in order to get one, and you could not get one?

Mr. BRAND. I actually know of cases where they filed orders for the same 20 cars every day for 30 days.

Mr. HAUGEN. And you could not get any?

Mr. BRAND. No.

Mr. HAUGEN. There was a car shortage.

Mr. BRAND. Sometimes they could not get any at all.

Mr. HAUGEN. I am speaking of the last year.

Mr. BRAND. Yes.

Mr. HAUGEN. Then of what value would it be if you could get cars; and is it not a fact that the whole thing is regulated by the car service; and that everything between the packers and the shippers also is regulated by the railroad administration car service?

Mr. BRAND. In our work we have been able to be of service in helping to get some cars where otherwise they would not have been able to get any.

Mr. HAUGEN. You mean that you controlled the car service?

Mr. BRAND. In Iowa the stock-car shortage was very acute at times this winter. Our work with the car-service commission resulted in shippers getting a good many cars in many territories.

Mr. HAUGEN. I am sorry that you were not discovered before. Everybody has been without cars.

Mr. BRAND. Mr. Sykes and the other gentlemen have discovered us, to their advantage. We have been able to help them; not as much as we wished or as we tried to help, but we did help.

Mr. HARRISON. The Director General stated that one of his greatest difficulties was to get correct information as to the number of cars needed at any particular point. He said that people made representations to them as to what cars were needed, which proved to be utterly wrong, and he said that he asked everywhere just how many were actually needed, and that you practically were the only agents that furnished him with definite, correct information.

Mr. BRAND. In connection with our transportation activities we have found it valuable to work with the railroad administration on those lines. I called at the western director's office in Chicago about a month ago, and his assistant told me frankly that they would rather have our information than the information they got anywhere else, because they recognized that it was disinterested and honest.

Mr. HAUGEN. Everybody wanted cars and everybody was asking for cars. I should think that information ought to be sufficient. I came in contact with a number of shippers last fall, many of whom had been waiting three or four weeks for cars. Of what value would information be as to what is to be shipped when everybody is wanting cars and there are no cars to be had?

I am trying to get an answer to my question as to what value we get out of this service. Does it lower the price?

Mr. BRAND. The consumer gets a lower price, and the producer gets a higher price, because things are hauled direct to the market instead of being diverted from one hand to another five or six or seven times.

Mr. HAUGEN. Have you been cooperating with the packers to hold back shipments or stop shipments to accommodate the packers?

Mr. BRAND. We have not. We have been accused of doing a great many things for the packers, but we have not discovered ourselves doing anything for any packer that we did not do for any other citizen.

Mr. HAUGEN. I say, have you been cooperating with the packers? What has been done? You need not enter into any explanation as to others.

Mr. BRAND. We exact from the packers daily, weekly, and monthly reports with reference to their——

Mr. HAUGEN. That is not the question. Have you been cooperating with the packers in delaying shipments—in regulation shipments?

Mr. BRAND. No; we have not.

Mr. HAUGEN. Then of what service is this whole thing, inasmuch as it is controlled by the packers and the car service?

Mr. BRAND. We work with the car-service people very fully, and we get cars for the shippers in many cases where they would not be

secured otherwise. In many cases it would probably be impossible, except for our intervention, for them to get cars.

Mr. HAUGEN. You have not been manufacturing cars or anything of that kind, have you?

Mr. BRAND. No; but it is a question of which use shall a car be put to.

Mr. HAUGEN. We have the statement of the railroads—of the railroad director—and also of the Food Commission, and the statements do not seem to jibe, exactly with yours, as to cars.

Mr. BRAND. We could bring you many evidences of cars that were secured because of our intervention in furnishing a definite, reliable statement of needs. We get every week now for potatoes a statement of the definite needs of the different sections.

Mr. HAUGEN. Our delegation has spent weeks, nights and days, on this car situation, and I think that we ought to have some knowledge about the car shortage. At least, we have had the statement of the Director General of Railroads, and we tried to look up everybody in authority, and this is our first discovery of the Bureau of Markets having anything to do with the supply of cars, or having cars to supply.

Mr. BRAND. We do not have the cars to supply, but we do present the facts to the railroads, or the Railroad Administration, which results many times in the cars being assigned where otherwise they would not be. Just as an illustration, the basket manufacturers of New Jersey and Delaware were without certain basket-making materials because of their inability to secure logs. It appears that they were asking for more logs, possibly, than they were entitled to. We made an investigation of the matter, determined their exact needs, and secured definite orders from the Railroad Administration to move the requisite number of logs each week; so that those basket manufacturers could get out their manufactured product; so that later the producers would have containers in which to ship their products. That is an illustration of the specific kind of aid we are able to give in the line of car-service assistance.

Mr. HAUGEN. Let us get back to this service of yours, and especially to the stock business and the telegraphic reports. Is it not a fact that the railroad companies and the stockyards and the commission men have been furnishing that information all the time, and that the expense has been paid by the various organizations, very largely by the railroads, as I understand it, and that this is a duplication of the work that was being done and at an additional expense to the Government?

Mr. BRAND. No; it is not. This very morning a representative of the Railroad Administration was at my office to get suggestions as to how they might utilize the type of service which we have devised, which has never been given before.

Mr. HAUGEN. And how the Government might pay the expense of distributing it?

Mr. BRAND. That is a question for discussion? The matter may result in the shippers being required to pay a part of the expense, but it is not a service which has ever been granted before. It could not have been furnished from any source whatsoever, because no one has had the authority or the machinery to get the facts.

Mr. HAUGEN. In Iowa we ship cattle or hogs, and every shipper in my section of the State who desires it gets the market report.

Mr. BRAND. He gets what is supposed to be the market.

Mr. HAUGEN. What is that?

Mr. BRAND. He gets what is supposed to be the market. He gets a flash wire which is very unreliable, generally speaking, and that is one of the things we are trying to do away with. We want to substitute a reliable wire for that flash wire.

Mr. HAUGEN. Where do you get this information?

Mr. BRAND. We get our facts by going out in the market where live stock is actually being bought and sold, at the yards, and we often examine the account sales and see what is actually being sold and what is being paid for it. The other is flashed out by the C. N. D. people, who carry it on as a purely commercial service. It is very inaccurate, so much so that we are doing our best to get that particular sort of service done away with.

Mr. HAUGEN. So you say the report of the market that is going through the press and is being sent out over the wires of the country every day is absolutely unreliable?

Mr. BRAND. I would not go that far.

Mr. HAUGEN. How far would you go?

Mr. BRAND. I would say that we have checked up many of them and found that many of them were very inaccurate. I would not say that they were absolutely unreliable, but they do not serve the purpose that our reports serve.

Mr. HAUGEN. How much difference is there between your reports and those sent out by the Drovers Journal, for instance? It gives reports of sales.

Mr. BRAND. The Journal's figures are more accurate than most of the others. They are far more accurate than the flash figures. We have often used them and our relations with the Drovers Journal in connection with these services are most cordial. They use, likewise, many of the figures that we collect. I have brought along a copy of an editorial from the Drovers Journal on this particular subject, commending our service most highly and asking its continuance.

GOVERNMENT REPORTS.

In many quarters there has been suspicion cast upon reports of the Federal Government as to crop conditions, etc. One agency of the Federal Government, the Office of Markets and Rural Organization, has not had this reflection put upon its work.

The latest endeavor of the Office of Markets is that of disseminating meat trade reoprts daily from the leading distributing centers in eastern territory. These reports, which were inaugurated only a few weeks ago, have the stamp of reliability and are accepted by the live-stock trade as a barometer of conditions having a direct bearing upon live-stock values.

The Federal agents whose business it is to gather the market information are men who have had experience along the lines in which they are working, and their frank statements as to trade conditions must be accepted at face value.

When the beef, pork, or mutton market is good the reports state this to be the case, and as evidence of their impartiality is the frankness of the reporters in describing a condition of demoralization in the trade when it is encountered.

From the Chicago Daily Farmers and Drovers Journal, April 25, 1917.

As a further illustration, here is a letter from one of the commission merchants in Fort Worth——

Mr. HAUGEN. I do not care about these letters. Do you count the cattle in the pens so as to get the exact number that arrived in Chicago?

Mr. BRAND. We report in carloads.

Mr. HAUGEN. I know; but that is what they do?

Mr. BRAND. Yes.

Mr. HAUGEN. How do you verify these figures?

Mr. BRAND. We go by the actual bill of lading which the railroad issues.

Mr. HAUGEN. You go over every bill of lading in the morning and ascertain the number of cattle shipped to Chicago?

Mr. BRAND. No; as I stated before, the railroad officers do that without charge, and wire us those facts. Every division superintendent of every railroad west of the Allegheny Mountains sends to us every night——

Mr. HAUGEN. Then you take just exactly what the other people do?

Mr. BRAND. No; no one else gets that information.

Mr. HAUGEN. From the railroad company?

Mr. BRAND. The railroad would not furnish it to anyone else.

Mr. HAUGEN. They have been furnishing it.

Mr. BRAND. Very little of it. In fact, under the act to regulate commerce they are not permitted to.

Mr. HAUGEN. I have been in the shipping business about 40 years, and I know that reports are furnished. In many instances shippers on the way to Chicago get reports from Chicago at 9 or 10 o'clock direct from the market.

Mr. BRAND. But no one ever has, in the past, received the character of information we furnish.

Mr. HAUGEN. I said in the last 40 years. I could not tell definitely beyond that.

Mr. BRAND. I judge from our study of the matter and from the statements of the people who are affected.

Mr. HAUGEN. It is a pretty big proposition to question the correctness of all these people. There are a lot of them.

Mr. BRAND. I am not——

Mr. HAUGEN. You are questioning the accuracy of their reports?

Mr. BRAND. I am questioning the detail and correctness of the reports, and the possibility of these other agencies getting reliable information which is comparable with what we get.

Mr. HAUGEN. That is going quite a good ways.

Mr. BRAND. I think none of them would feel that we are questioning them in the slightest. If you care to have me. I could read you here any number of letters from all of that class of people as to the character and reliability of the information.

Mr. HAUGEN. Have you any information from any railroad company or any packing house or any shipper——

Mr. BRAND. Yes; we have from all classes of shippers.

Mr. HAUGEN (continuing). Stating that these reports being sent out are inaccurate?

Mr. BRAND. That our reports are inaccurate?

Mr. HAUGEN. Stating that the reports of the Drovers Journal and others are inaccurate?

Mr. BRAND. I have not stated that the Drovers Journal's reports are inaccurate. They do not take it up on that line. They say that our reports are the best they have ever had. The comments we have do not say that the other fellow is inaccurate, but they say that these are the best that they have ever had.

Mr. HAUGEN. That is because you pay the expense of them—the expense that they have been paying?

Mr. BRAND. No; I think they consider them the best because we get the information from all these direct sources. For instance, here is a letter [reading]:

HORRIGAN & DOE CO.,
37-39 FANEUIL HALL MARKET,
Boston, Mass., September 26, 1917.

Mr. W. C. DAVIS,
1806 Customhouse, Boston, Mass.

DEAR SIR: Your information in regard to the Albany wreck was of a valuable nature. We think it saved us some hundreds of dollars and think that we should extend our thanks to you and your department for the same.

Respectfully, yours.

HORRIGAN & DOE CO.,
Per J. H. HORRIGAN.

That was a wholly unsolicited testimonial. We heard of a wreck at Albany which delayed beef for the Boston market. We put that information out immediately and prevented a rise in price that would have taken place otherwise, which was distinctly to the benefit of everybody except the people who were shipping in beef.

Mr. LESHER. From whom was that?

Mr. BRAND. That is from Horrigan & Doe, of Boston.

Mr. HAUGEN. That is pretty slow, even for Boston, to take a week to find out about a wreck.

Mr. WASON. You think under ordinary conditions a wreck in Albany would affect the price of beef in Boston?

Mr. BRAND. Yes.

Mr. WASON. How much?

Mr. BRAND. Two or three dollars a hundred. I was surprised, myself, to find out that that was the situation.

Mr. WASON. You think that is so?

Mr. BRAND. Yes.

Mr. WASON. You confine that to what railroad?

Mr. BRAND. I simply accept the statement of the Boston trade.

Mr. WASON. Take it three years ago; do you think it would have affected the price of meat in Boston?

Mr. BRAND. Yes; I think so.

Mr. WASON. How much?

Mr. BRAND. I am unable to say; but the Boston trade states here that whenever they have such a situation prices are run up on very small excuses of that character.

Mr. WASON. Do you rely upon one dealer?

Mr. BRAND. No.

Mr. WASON. Or do you rely upon the entire number of distributors?

Mr. BRAND. We rely upon a general report of the trade.

Mr. WASON. I live 40 miles from Boston. Do you think it would affect the wholesale price of beef in Nashua, N. H.?

Mr. BRAND. I am not able to say that. I would say, though, that if the Nashua buyer went in the market the morning that it was affected by the wreck, he certainly would pay more for his meat.

Mr. WASON. I am not quite satisfied with your conclusion there.

Mr. BRAND. I am merely giving you the conclusion which our men in the Boston market get from the trade in Boston. It is not my conclusion. It is a matter of their report.

Mr. WASON. And they say it is due to this wreck? They are sure of that?

Mr. BRAND. Yes; they are; absolutely.

Mr. WASON. And I question that conclusion. I am not satisfied, from my own knowledge and information, that what you have reported from somebody is correct; and I know something about the situation.

Mr. BRAND. I brought along one letter which indicated it. That report came from a number of firms in Boston, and I think you would find that every *buying* firm in Boston would agree in that.

Mr. WASON. I know they will not.

Mr. BRAND. The *selling* firms would probably feel that it was to their advantage, because it removed an advantage which otherwise they would have, or would feel that they would have.

Mr. WASON. I do not know how the majority would feel, but when you say that every buying firm would feel that way I know that is not so.

Mr. BRAND. The buyer is the one who has the advantage of that situation, because the seller is not able thereupon to raise the price.

Mr. WASON. Do you know how many cars of beef are shipped into Boston daily by way of Albany?

Mr. BRAND. Yes; I think we have those figures.

Mr. WASON. Will you put them in the record?

Mr. BRAND. Yes, sir. I can not give them offhand, because there are anywhere from 4,000 to 9,000 cars of live stock shipped every day.

Mr. WASON. I did not know but you might happen to have that. Will you just put those figures in the record?

Mr. BRAND. Yes; I shall be glad to do so.

(NOTE.—Receipts per day are not available, but during March and April receipts of western-dressed cows amounted to 13,790 carcasses, while receipts of western-dressed steers amounted to 16,275 carcasses.)

Mr. HAUGEN. How many carloads were involved in this wreck?

Mr. BRAND. I do not know. I do not think it bore so much upon that point as it did upon the closing up of the transportation channel, which made it impossible to get the material into Boston at the usual time when the market required it. For instance, this shows just for a single day, the carload shipments of live stock [indicating statement]. Total for this day, 7,482.

Mr. WASON. For Boston?

Mr. BRAND. No; for all the markets in that report.

Mr. WASON. Does that show what Boston had?

Mr. BRAND. Boston for this particular day had 174 cars.

Mr. WASON. What particular day was that?

Mr. BRAND. That was April 22. That was Boston as destination.

Mr. WASON. By way of Albany?

Mr. BRAND. No; that is by all ways; shipments of all live stock from west of the Alleghenies to the Boston market, no matter where it originated. The complementary report shows the origin of all of the live stock, not by station, but by States.

Mr. ANDERSON. I do not know that I understand you correctly, and I do not want to misunderstand what you say. Are we to understand that a wreck on a railroad which would hold up this beef for a matter of a few hours would affect the cash wholesale price of beef in the Boston market?

Mr. BRAND. Exactly so. If the expected arrivals to-day in the Boston market are not as large as they ought to be, it has an imme-

diate effect upon the wholesale price, and if there is a wreck at Albany r in any important gateway leading into Boston, over which a siderable number of live stock is shipped, it would affect the price, as it did in this case affect the wholesale quotations in Boston.

Mr. ANDERSON. Does it affect the retail price any?

Mr. BRAND. Our experience with the retail price is that nothing has much effect upon that; that is, it is always high.

Mr. LESHER. Suppose it was reported that there were 100 carloads. Would that affect the price?

Mr. BRAND. Yes; the market is very sensitive; and the facilities for storage are sufficient only for the period that they are required to have storage in their regular movement, and as a consequence there is not any great reservoiring which is utilized to keep equalized prices.

Mr. LESHER. They have as much as a week's storage, do they not?

Mr. BRAND. They probably have more than a week's storage, but it is occupied by exportable commodities and things contracted for and all sorts of commodities that can not be switched into the local market. For instance, in Boston they are not able to take that. It is not available for use in Boston.

Mr. ANDERSON. Do any of these items cover a survey of the available supply of food products?

Mr. BRAND. Yes; the subsequent item does.

(At this point Mr. Lever resumed the chair.)

The CHAIRMAN. Had you completed your statement on the last topic?

Mr. BRAND. Yes; we have been discussing live stock and meats.

The next heading in the bill is "Market news service on butter, cheese, eggs, and poultry."

There, again, we have had a similar experience, so far as the utility and saving effect of the work is concerned. We think it is not too much to say that the reports in all of these matters are becoming the standard reports of the country. They are regarded as the most reliable, and they are the most sought and used in the consummation of trades. The following letters indicate that this is true:

UNITED STATES FOOD ADMINISTRATION,
Chicago, April 6, 1918.

Mr. CHARLES J. BRAND,
Bureau of Markets, United States
Department of Agriculture, Washington, D. C.

DEAR SIR: In response to your circular letter of 30th ultimo will say I do receive the daily bulletins of butter and eggs and weekly bulletin on cheese issued from your Chicago branch office.

These bulletins are our mainstay in keeping track of conditions in butter, egg, and cheese markets, and we sincerely hope that nothing will be done to interfere with the regular making and posting of reports.

Yours, very truly,

UNITED STATES FOOD ADMINISTRATION,
By H. C. GARDNER.

SUGAR CREEK CREAMERY CO.,
Danville, Ill., April 6, 1918.

CHARLES J. BRAND,
Bureau of Markets, Washington, D. C.

DEAR SIR: We have at hand your letter of March 30 asking us our opinion of the daily bulletins on butter, eggs, and cheese issued by you.

Being in the butter business, we, of course, are more particularly concerned in the daily butter bulletin, and we want to express our emphatic and unqualified appreciation of same.

We understand this is a war measure. We hope, however, it will continue in times of peace. It is one of the best things for the creamery men that has been instituted in a very long time.

We would suggest as a next step an arrangement for a Federal inspection of butter at the principal cities, the same way grain is now inspected.

Yours, very truly,

SUGAR CREEK CREAMERY CO.,
G. C. MABLE,
Secretary and Treasurer.

THE FOX RIVER BUTTER CO.,
Chicago, April 5, 1918.

MR. CHARLES J. BRAND,
Chief of Bureau of Markets, Washington, D. C.

DEAR SIR: Your daily bulletins on butter and eggs and weekly bulletins on cheese are very helpful. In fact, never before has the trade had complete figures on arrivals in the principal markets nor complete reports of stock on hand in public warehouses.

We always want something in addition. That is human nature. But we are very much pleased with the reports so far and can not criticize. They can not be improved upon unless you can conveniently give us movement in and out of storage in a greater number of important cities. The same applies to your report of butter and eggs on hand.

I can say this: The trade takes your reports seriously, and they are fast becoming the only figures used.

I might add your reports will be much more valuable the second year, because then we can look back to the year before and get a better comparison and therefore better idea of the actual supply, etc. To illustrate: On Thursday morning we had in Chicago 41,606 tubs of butter. We really don't know whether that is normal stock, more than normal stock, or less than normal stock. Sooner or later we will get to know what a really normal stock is; then the reports will be invaluable.

Yours, very truly,

C. E. CROMER, *Vice President.*

NAVY DEPARTMENT,
BUREAU OF SUPPLIES AND ACCOUNTS,
Washington, D. C., April 2, 1918.

To: United States Department of Agriculture, Bureau of Markets, Washington, D. C.
Subject: Daily butter market bulletins.
Reference: Your letter March 30, 1918.

SIRS: The Navy is desirous of having the Bureau of Markets continue sending daily butter-market bulletins, inasmuch as they are of great assistance in keeping the Bureau of Supplies and Accounts advised of such information as may not always be readily accessible.

No suggestions for improvement can be offered at this time.

Respectfully,

E. E. ROGERSON,
Assistant Paymaster, U. S. N. R. F.

OFFICE OF THE CAMP QUARTERMASTER,
Camp Upton, N. Y., April 3, 1918.

From: Assistant Camp Quartermaster, Subsistence Officer.
To: Chief of Bureau of Markets, U. S. Department of Agriculture, Washington, D. C.
Subject: Bulletins.

1. Reference your communication 30th, this office advises that the daily bulletins on butter and eggs received from your office have been quite valuable to us in checking prices on butter, which is now purchased on a basis of the daily market price.

2. This bulletin has also been valuable in enabling this office to advise mess officers throughout the camp what they should pay for fresh eggs which they buy from sources other than the quartermaster.

JOHN C. CALHOUN, Jr.,
First Lieutenant, Q. M. C., N. A.
HOLDEN CREAMERY CO.,
Holden, Mo., April 5, 1918.

CHAS. BRAND,
Washington, D. C.

DEAR SIR: Your market reports are a valuable aid to us. We would gladly pay for them rather than have them discontinued.

Very truly,

W. S. DILLE, *Manager.*

SAUK RAPIDS, MINN., *April 6, 1918.*

CHIEF OF BUREAU OF MARKETS,
United States Department of Agriculture, Washington, D. C.

GENTLEMEN: Your letter of March 30 at hand and contents noted.

The value of the daily bulletins on butter to us is that when we receive the returns from the East for our butter we can check back and see what the market price was at the time returns were made. Then we can tell on what basis our butter was sold.

We appreciate the daily bulletins very much.

Yours, very truly.

FARMERS' COOPERATIVE CREAMERY,
A. O. ROGOSHESKI, *Manager.*

NEW YORK, *April 4, 1918.*

CHIEF BUREAU OF MARKETS,
Department of Agriculture, Washington, D. C.

DEAR SIR: Your communication under date of March 30 relative to daily bulletins on butter and eggs and weekly bulletins on cheese is received and noted with interest. The exchange, as such, is not an instrumentality of barter in cheese, but the figures collated are of distinct advantage to those of our members who follow the butter and cheese industry.

The daily bulletins covering the stocks of butter and eggs on hand each day have become an institution with us, and any curtailment of the service in respect of those commodities would be a distinct loss and would leave a wide gap in the factors which aid in giving a clear outlook of market conditions.

We appreciate the bulletins highly and can make no suggestion which will add to their comprehensiveness or value.

Very respectfully,

NEW YORK BUTTER AND EGG EXCHANGE,
Per A. W. GEDNEY, *Superintendent.*

STATE OF NEW HAMPSHIRE,
DEPARTMENT OF AGRICULTURE,
OFFICE OF THE COMMISSIONER,
Concord, April 6, 1918.

CHARLES J. BRAND,
Chief Bureau of Markets,
Department of Agriculture, Washington, D. C.

DEAR SIR: We have your letter of recent date relative to the daily market bulletins on butter and eggs and the weekly bulletins on cheese. I would say that all of these bulletins are kept on file on the table in a conspicuous place in our office, where farmers and others interested in the prices as quoted in them can refer to them. I think they will be of even greater assistance to our people as soon as they fully understand just how important the marketing is and how vital it is to know prices in the different market centers, so that they can decide which place is best to ship their products to.

I wish it were possible for us to have more information through this bulletin on New Hampshire markets.

If our department can be of service to you in any way, we should be only too glad to assist in this work, which we are just beginning with a very small appropriation.

Yours, very truly,

JAMES C. FARMER,
Deputy Commissioner.

Mr. McLaughlin. Is not this one thing true, that your office, at large expense, is gathering these reports, and they are taken and used by individuals and companies that heretofore were gathering their own reports at their own expense, and they are now relieved of the responsibility and the expense of gathering them, throwing that burden on the public?

Mr. Brand. That burden was on the public before, and in ten times as heavy a load.

Mr. McLaughlin. Explain that, please.

Mr. Brand. It came out of the products which each one of these firms sold. That is illustrated by the letter which I read from one of these firms which paid $1,000 a month for market information. Of course, they took that out of the price which they gave to the producer for his stuff. Every firm did the same sort of thing.

Mr. McLaughlin. Have you evidence that the charges they are making now are in any respect reduced on account of the burden you have taken off their shoulders?

Mr. Brand. I have not a doubt that many, many firms have done away wholly with those expensive forms of information service that they were using, and are using our service, which is far more perfect than anything they could get no matter how much money they spent, because they had not, and have not, the power of the United States Government to get information.

Mr. McLaughlin. You went over one thing here. You relieve them of the expense. Who gets the benefit of it?

Mr. Brand. All elements of the industry and particularly the producer and the consumer, because it reduces the cost.

Mr. McLaughlin. What evidence have you of that?

Mr. Brand. That is difficult to prove arithmetically. Competition forces all of them to be as efficient as they can be.

Mr. McLaughlin. Certainly the prices of products have not been reduced.

Mr. Brand. I am afraid that if we are looking for a demonstrable reduction in price—and I do not believe Mr. McLaughlin is looking for that—we can not prove it.

Mr. McLaughlin. I would like some evidence that the public generally is getting the benefit of the assumption of this burden by the Government and the relief of those who formerly had the burden that is now assumed by you.

Mr. Brand. We reach every day, I should say, a minimum of 50,000 people—and largely farmer producers and other shippers—who in the past have never had any information, and could never get any information; and if they were continuing to rely, as they did in the past, upon the information given by dealers, they would go on in the same very inefficient farming that they have always carried on.

Mr. McLaughlin. Supposing the producer has that information; still the companies he deals with fix the price, after all.

Mr. Brand. They do not fix the price as low as they did before, as is shown by the letter of the gentleman from Florida who got the difference between $1.80 and $2.15 for his grape fruit.

This work is of the greatest possible advantage to the producer.

Mr. McLaughlin. I am not prepared to say that you are not right, but I was asking for some evidence of it, for my own satisfaction, and

so as to be able to answer questions asked and criticisms that will be aimed at this when it is up on the floor of the House.

Mr. BRAND. Take live stock, for instance. The commission men on the market necessarily represent the producer. The commission men have said to us that the information we are furnishing enables them to get very much better money for live stock than they could get in the past, because in the past the packers were the only men who had as perfect information as we now furnish; and I think that is a very truthful statement.

Mr. MCLAUGHLIN. Yes; you had not said that before.

Mr. BRAND. Well, another case that came up, perhaps before you came into the room, was that of a Texas gentleman who was buying seed potatoes, and his local market demanded 6 cents a pound. Our market report showed him that he could get seed potatoes in commercial quantities for $4\frac{3}{4}$ cents a pound.

Mr. ANDERSON. What did you have to do with marketing service in regard to potatoes in Minnesota and Wisconsin? Did you have anything?

Mr. BRAND. We certainly did, and have at this moment. We have put about 70 of our city and field stations into this work and the campaign is now going on to reduce the retail price of potatoes so as to throw them into consumption, and we have had negotiations for car service so that when the potatoes are ready the cars will be there to haul them. We are carrying on a constant campaign on that subject all through the United States.

Mr. ANDERSON. What prices are you setting?

Mr. BRAND. The prices vary greatly; we do not set them. In Wisconsin 80 cents a hundred pounds and in Minnesota 60 cents, and in some cases 90 cents.

The CHAIRMAN. I notice in my home papers that you are appealing to the potato producers and holders to reduce the price on the one hand, and you are appealing to the people on the other hand to eat more potatoes. Have you not a rather contradictory situation there?

Mr. BRAND. No; I do not think we have. We may have as many as 30,000,000 bushels of surplus potatoes. If we can not make a retail price of between 25 and 35 cents a peck for them, those potatoes are not going to be used, because the consumer will not use them as generously as we think he ought to use them unlesss the prices rule thereabouts; so that the question came down to this point, "Shall we urge generous marketing at a low price on the part of every wholesaler and retailer, and get this product into the home of the consumer, where he will eat them, or shall we let the potatoes stay on the farm and sprout?" We had to decide between these courses, and we have taken what we believe to be the wise course in the matter. We will be subject to some criticism. We expect to be. We already have been. Some producers are saying, "You are urging us to sell our potatoes for less than they cost us to raise" and we are saying, "Better that than to get nothing for them."

The CHAIRMAN. Let us see if we get the theory in regard to the market news service. It is a large and, I think, an important item. The theory of it is that the Department of Agriculture is the only instrumentality we have in this country for furnishing reliable information to producers, middlemen, and consumers?

Mr. BRAND. Yes.

The CHAIRMAN. Both as to production and as to daily movement of these crops?

Mr. BRAND. And price.

The CHAIRMAN. And price, and, that being true, it follows that the public must act upon the information, and you furnish them this reliable information?

Mr. BRAND. Yes; that is the basic theory, taken together with the fact that the Congress has now given us the power to elicit information which no one else could possibly get.

The CHAIRMAN. And it gives you the power also to make the information accurate?

Mr. BRAND. Yes.

The CHAIRMAN. That is the idea?

Mr. BRAND. To check it up.

The CHAIRMAN. To check it up.

Mr. BRAND. No market information anywhere, either in the United States or anywhere else in the world, has ever been so comprehensive and reliable.

Mr. MCLAUGHLIN. Has Canada any such system as this?

Mr. BRAND. They are trying as far as they can to follow the Bureau of Markets. They frequently have men here working with our men. One of their seed-report men has been working in our bureau with our seed men for the past five or six weeks, because our problems in that regard are the same practically. We are in constant cooperation with them by wire. Their live-stock branch is adopting some of our systems, and their fruit reports are following our fruit work.

The CHAIRMAN. The idea here is publicity?

Mr. BRAND. Truthful publicity.

The CHAIRMAN. And that there is always more rascality in the dark than in the daylight?

Mr. BRAND. Yes.

Mr. MCLAUGHLIN. Ruthless publicity.

MARKET NEWS REPORTS ON GRAIN, HAY, AND MILLED FEEDS.

Since the service was inaugurated in August, 1917, the country has been divided for the purposes of this work into 10 districts, viz: The Middle Atlantic, South Atlantic, North Atlantic, Southwestern, West Central, East Central, North Central, North Pacific, Southern Pacific, and Rocky Mountain, and offices have been opened in New York, Richmond, Va., Kansas City, Mo., Atlanta, Chicago, Minneapolis, and Oklahoma City. Offices will soon be opened at Denver, San Francisco, and Spokane. The reports issued from these field stations are sent out biweekly and show stocks of grain and hay in dealers' hands and the probable receipts and shipments for the preceding two weeks from a given date, together with prevailing prices. At the present time reports are sent to about 30,000 grain and hay producers, dealers, and food manufacturers and buyers of foodstuffs, grain, and hay. By July 15 probably 60,000 persons or firms will be served by reports or by sending to them directly telegraphic information regarding marketing conditions.

The service is being received with great favor by shippers and buyers, and the demand for reports is constantly growing. In response to a request for expressions of opinion regarding the value of the service, 2,104 replies were received, of which about 2,000 were favorable. Many large firms expressed appreciation of the work. A large percentage of the responses to this questionnaire, particularly in the eastern and southern divisions, came from farmers who seem to find the service very useful and seem particularly interested in the price quotations. Many of them state that they use these to check the prices offered by local dealers so that they may know whether they are getting full value for their products.

EXTRACTS FROM LETTERS PERTAINING TO THE SERVICE ON GRAIN, HAY, AND MILLED FEEDS.

"I have examined these with some care, and I wish to congratulate you upon the character of these reports."—John G. McHugh, Secretary of the Chamber of Commerce of Minneapolis.

"It seems to me that the report contains much of real value to the grain trade."—United States Food Administration, by Julius H. Barnes, New York City.

"We feel confident the reports will be of the utmost benefit to the entire trade."—C. H. Albers Commission Co., St. Louis, Mo.

"We are cutting our handling charge in two as we feel your way of handling the situation is absolutely the only way."—C. W. Carter Grain Co., St. Joseph, Mo.

The following comments were received from farmers in the places indicated:

Edw. A. Evans, Cheswoldt, Del.: He has a better idea when to sell and buy.

James Williams, Perry, Ga.: Is of great importance as he has grain, hay, and corn at all times for selling.

C. N. Kinney, Des Moines, Iowa: Aids in sales and storage problems.

Farmers Lumber Co., Keswick, Iowa: Can estimate his future grain business in his district.

Ihne Bros., Guttenberg, Iowa: Helps keep them posted on visible supply of grain.

Wallingford Bros., Wichita, Kans.: Gives valuable information regarding available supplies.

Edward Kelley Grain Co., Wichita, Kans.: Keeps them advised of supply on hand and prices prevailing in other territories.

The CHAIRMAN. All right. Take up the item, "Food and fertilizer surveys of the United States."

Mr. HAUGEN. The Food Administration is doing the same work as you, is it not?

Mr. BRAND. No; the Food Administration handles a different phase of the matter. We work together on all these matters.

Mr. HAUGEN. What does the Food Administration do?

Mr. BRAND. It enforces the licensing regulations, which really goes to the question of whether or not a business man is dealing honestly or not, and is not at all the type of market information that we handle.

Mr. ANDERSON. Have they not a very large statistical bureau down there which is constantly gathering information of a very similar character to that which is gathered by this bureau and other bureaus of the Department of Agriculture?

Mr. BRAND. No; I think not. They get reports only from their licensees and the only persons who are licensed are persons who do business above a certain sum of money in a year.

Mr. HAUGEN. We had a potato expert from the Food Administration before our conferees the other day, and he claimed about the same and the actual work being done; and it occurs to me there is a duplication of work there.

Mr. BRAND. Absolutely none. The potato men of the Food Administration procure practically all their information from us, and our men are working with their men all the time, and there is no duplication. I am able to say that, absolutely.

Mr. HAUGEN. There is cooperation?

Mr. BRAND. There is cooperation, but absolutely no duplication.

Mr. WASON. Which branch—the food branch or your branch—is making in certain localities a survey of homes and what they consume there?

Mr. BRAND. No one is making such a survey except a voluntary survey which we are carrying on, in which we send to householders a schedule which we ask their cooperation in filling, giving their

consumption for a period of time, in order that we may arrive at the average family consumption of those classes of families for the country. That is purely a voluntary work. I think we have some 20,000 such schedules that persons have voluntarily filled out for us, in order to get those average figures of household stocks and consumption.

Mr. HAUGEN. Do you have people going from house to house?

Mr. BRAND. No.

Mr. WASON. The Food Administration does, does it not?

Mr. BRAND. No. Some of our cooperators have done some such work. For instance, some teachers who have undertaken to get figures on certain things have had their graduate students go from house to house in that way; but that is only in some cases.

Mr. HAUGEN. Literature is being sent out all the time, and questions being asked. Who is sending that out, your bureau or the Food Administration?

Mr. BRAND. If anything of the character that Mr. Wason describes is being done, I am able to say that we are not doing it.

Mr. LESHER. The Food Administration has gone from house to house in the matter of flour?

Mr. BRAND. In the State of Pennsylvania the Food Administration has done that?

Mr. LESHER. Yes.

Mr. HAUGEN. They did it in Iowa.

Mr. BRAND. They have determined accurately or generally the home stocks of flour. I did not know that they had done that except in Pennsylvania.

Mr. HAUGEN. The question I wanted to ask is this. The Food Administration is taking an invoice of stock about every other month—or whenever it may be. How do your estimates compare with the estimates or the findings of the Food Administration?

Mr. BRAND. The Food Administration does not carry on any of the lines of activity that we do.

Mr. HAUGEN. They take an invoice of stock—that is, they make a survey and estimate.

Mr. BRAND. They get reports only from their licensees, who constitute only a very small proportion of the persons dealing in these matters. For instance, we are just to-day ready to release the reports on stocks of wheat and flour on the 1st day of April, secured at the specific request of the Food Administration. They have no such information except for a limited number of dealers, but we get it from all of the dealers, irrespective of size.

Mr. HAUGEN. I was not inquiring about the source. How do your results compare with those of the Food Administration?

Mr. BRAND. I am unable to say as to the comparison between their licensees and the total; but of course there must be a great difference. I do not suppose they have under license more than 50,000 enterprises. We actually received reports from 325,000 different firms as of December 31. You can see that the difference in totals would be very great, indeed.

Mr. HAUGEN. What the Food Administration does is to check up the shipment of every order and take an invoice. Take wheat, for instance, how does that compare with the estimates of the department? Is it not 75,000,000 bushels lower than the Department of Agriculture estimate?

Mr. BRAND. I think you must be comparing the figures of the Bureau of Crop Estimates with the same figures that the Food Administration may have collected. I have not seen their figures, but I have seen our department's figures, and I think they are extremely reliable.

Mr. HAUGEN. What I am getting at is, there seems to be duplication of activities. I want to see how close you get together. I understand there is a difference of 75,000,000 bushels on the one item of wheat.

Mr. BRAND. I am sure on that proposition Mr. Estabrook could give you exact facts. That does not come in our field. I can give you the facts as to commercial stocks of wheat and flour from our own survey. I have those.

Mr. HAUGEN. Have you compared those figures with those of the Food Administration?

Mr. BRAND. They had nothing with which we could compare them.

Mr. HAUGEN. It is a question between you and Mr. Hoover, then, whether we shall take your word or his word for it? They report that they are doing this work.

Mr. BRAND. Only from the licensees.

Mr. HAUGEN. Well, whatever it may be.

Mr. BRAND. We are in touch with their divisions every day, and I am quite confident that their own representatives would not come and ask us for this information if they had it. For instance, if the Division of Coordination of Purchases desires to know the stocks of canned goods, they come and ask us, "Can you tell us where we will find stocks of these goods?" I remember one instance where they needed particular classes of canned goods, and we were able to furnish them with the names of 132 canneries and 173 leading wholesale grocery firms which had large stocks of those goods. In acknowledging receipt Mr. Heyl stated that it would be most useful and expressed hearty thanks.

Mr. HAUGEN. Did they ask for prices?

Mr. BRAND. No; they asked for location of stocks, that they might make purchases for the allies and the Army.

Similarly, when they sent a gentleman across the water on meat matters, the first thing he did was to come down and get all of our figures on live stock and meats, quantities in storage, and things of that sort. I recall particularly that he stated that the information was just exactly what he wanted.

Similarly with other things. There is no duplication, because they are not doing the same thing. They are dealing with their licensees. There has been some question as to the matter of duplication, and we have checked it up time and again, and have had conferences with Food Administration officers on the subject, and they agree that there is not. I am sure there is not, because, in the first place, you have to have the mailing list of all these people. When you have a mailing list of 500,000 people who are making reports to you more or less periodically, you would know if there was anyone else in the United States who had them, because you have to get in touch with every agency that handles those things in order to make up such a list.

Mr. HAUGEN. There would be other ways of getting information. They might adopt different methods of getting it. They have all these licensees to draw upon, that is true, and they could get it through them, probably. But what I was interested in getting an answer to was whether money was being spent in the duplication of that line of work.

Mr. BRAND. I think not. For instance, in the matter of fish, they have a fish division. Mr. Fowler, a man who is perhaps the most able in this line of work in the world, is in charge. He looks upon us as the information getting agency in all this matter. We get all the figures for the United States, and so with other things. Within the last 10 days or two weeks Mr. Horne, who is in charge of their storage division, came to us. We are getting reports on most of the commodities in cold storage, and we give that to the administration regularly. Now, they have asked us to get the available space for storage of butter or eggs, and that sort of thing.

Mr. WASON. I understood you to say that you made no survey of the stocks held on hand by the producers—the farmers.

Mr. BRAND. The Bureau of Crop Estimates did make a survey, both on August 31 and on December 31, of the supply on farms through their regular estimating machinery.

Mr. WASON. That is, for sale?

Mr. BRAND. It would be total farm supplies. It probably would not be for consumption, but their whole farm stock.

Mr. HARRISON. The Food Administrator, I understood, used our information regarding sugar stocks and spoke favorably of it.

Mr. BRAND. Yes. I went over that originally with Mr. Hoover and he said that he was mighty glad to get some critical figures on the subject.

Mr. ANDERSON. Does this flour-supply estimate of yours cover the visible supply?

Mr. BRAND. The supply actually on hand in all these commercial concerns?

Mr. ANDERSON. Would it cover what is ordinarily called the visible supply?

Mr. BRAND. No; it goes much further than what is usually included in that. The usual visible supply figures for grain comprise the stocks in elevators and warehouses at about 20 to 25 primary interior, lake, and seaboard markets.

Mr. ANDERSON. In not a similar survey and estimate made by Dun and Bradstreet?

Mr. BRAND. I anticipated that that question would come up, and I brought along the comparison. Our figures for April 1 show, for 1918, of wheat, 26,393,909 bushels; for 1917, 69,655,580 bushels. The same concerns reported for both years; they are what we call duplicates.

The Chicago Board of Trade figures—these are among those most commonly used—showed for 1918 only 4,695,000 bushels, as against our 26,393,909 bushels for 1918, and for 1917 the Chicago Board of Trade's figure was 47,363,000 bushels, as against our 69,655,580 bushels.

The Bradstreet report showed, for 1918, 10,180,000 bushels, and for 1917 48,525,000 bushels.

In every case we are running from two and a half to three times as much on visible stocks, showing a greater completeness of reports than ever was attained in these matters before.

Comparison of food-survey figures with those of "commercial visible supply."

Wheat.	Dec. 31, 1917, comprehensive food survey.	Apr. 1, 1918, monthly food survey.	Apr. 6, 1918, Chicago Board of Trade.	Mar. 30, 1918, Bradstreet.
1918	65,580,000	26,393,909	4,695,000	10,180,000
1917	129,178,000	69,655,580	47,363,000	48,525,000

Mr. ANDERSON. The fact that you show more than they do does not show that your figures are more accurate.

Mr. BRAND. Our figures are more complete and accurate for the information included because they cover 64,000 firms making reports and are obtained under a statute carrying penalties.

The CHAIRMAN. I wonder how many firms would be covered by Bradstreet, for instance; do you remember?

Mr. BRAND. We do not have the information by number of firms, but we know that they report 19 primary markets and 32 minor cities. Then take the matter of corn. Our figures showed 26,697,422 bushels of corn for 1918, and the Chicago Board of Trade showed only 17,360,000 bushels for 1918. For 1917 we show 25,747,495 bushels, while the Chicago Board of Trade shows only 11,276,000 bushels for 1917.

Mr. ANDERSON. That is for what date?

Mr. BRAND. April 1 for our figures, and for the Chicago Board of Trade we took their nearest date, April 6.

The CHAIRMAN. You say your report shows 26,000,000 bushels of wheat for 1918?

Mr. BRAND. Yes.

The CHAIRMAN. Where is that?

Mr. BRAND. I think that is visible supply.

The CHAIRMAN. Visible supply?

Mr. BRAND. We might say that is the new definition of "visible."

The CHAIRMAN. That is, the wheat that has moved from the farms into the trade?

Mr. BRAND. Yes; this is the total stock in all channels of distribution.

The CHAIRMAN. This does not include the amount of wheat on the farms still held by the farmers?

Mr. BRAND. No; this is only the wheat in commercial channels.

The CHAIRMAN. Twenty-six million bushels of wheat on the 1st of April shown in sight, which has moved from the farms?

Mr. BRAND. Yes.

The CHAIRMAN. Compared with how much for last year?

Mr. BRAND. Sixty-nine million bushels last year.

Mr. ANDERSON. Does that include what is in the elevators and what is on board cars and everything that has actually moved off the farms?

Mr. BRAND. The firms are required to report what is in transit as well as what is in hand.

The CHAIRMAN. And that is what you now mean by "visible supply"?

Mr. BRAND. Yes. Of course that is a great extension of what we have had as "visible" in the past. In the past it means what was in the houses at the terminals.

The CHAIRMAN. It is my recollection that the total supply of wheat, visible and invisible, has been estimated at 111,000,000 bushels.

Mr. BRAND. I have seen such a figure. I do not recall its source. That included 65,000,000 bushels on the farms.

Mr. MCLAUGHLIN. You have two figures there of wheat—for 1917, 69,000,000 bushels, and for 1918, 26,000,000 bushels. Were these two figures obtained from the same sources and on the same basis?

Mr. BRAND. In our figures the same identical firms are reporting for both dates.

Mr. MCLAUGHLIN. And on the same basis?

Mr. BRAND. The same basis.

Mr. HAUGEN. I understood you to say that the Bureau of Crop Estimates had charge of the estimates on grains?

Mr. BRAND. The estimates of grain on farms.

Mr. HAUGEN. You took what was in elevators and in the warehouses?

Mr. BRAND. Everything that is in the channels of distribution.

Mr. HAUGEN. That is information that was gotten by the Food Administration, is it not?

Mr. BRAND. No. No one has ever before obtained such complete and thoroughgoing information.

Mr. HAUGEN. Where do you get it, from the licensees?

Mr. BRAND. No; we get it from all dealers, whether licensed or not.

Mr. HAUGEN. Are not all the grain dealers licensed?

Mr. BRAND. Practically all, except the smaller dealers.

Mr. MCLAUGHLIN. They started out to license millers only who were making 100 barrels of flour a day or more.

Mr. HUTCHINSON. I understand that millers were licensed if their output reached 100 barrels a day, but now that has been extended to licenses to everybody, has it not?

Mr. BRAND. Millers are being licensed even down to the houses having a rated capacity of 75 barrels a day; but no packing house that does less than $100,000 of business a year is licensed. Our list includes 80 different classes of business. I uppose it would be safe to say that not one-sixth of those doing business, possibly, are under license. For instance, we are getting reports from over 8,000 grain mills, 13,000 elevators and grain dealers, and 1,200 general warehouses, and so on down the list.

The CHAIRMAN. All right, Mr. Brand.

Mr. BRAND. That takes us a little ahead of our story, but I think, Mr. Chairman, that the similarity between the news services is such that possibly it is not material to go into that any further. They deal on the same principle that you enunciated, with practically all of the farm products.

The CHAIRMAN. Are there any further questions on the news-service matter, gentlemen?

What is this heading on page 42, "Food and fertilizer surveys of the United States"?

Mr. BRAND. That is what we were just discussing, Mr. Chairman, except the fertilizer feature of it. In that work we do just the same for fertilizer elements as we do for food elements in the other cases. The principle is the same and the procedure is the same.

Mr. ANDERSON. I understand you say this food and fertilizer survey is the same thing. Of course, as I understand this proposition, this is not a daily service at all; it is a survey which determines the amount, or at least is supposed to determine the amount, of a given product which is in existence or in certain channels upon a certain day.

Mr. BRAND. Yes.

Mr. ANDERSON. In this particular instance you make the survey as of date of August 31?

Mr. BRAND. The preliminary survey was on August 31 and covered 18 of the most important items of food.

Mr. ANDERSON. That information did not become available until after the 1st of January?

Mr. BRAND. The complete form of that information did not become available for general public distribution. The percentages of increase or decrease were available for two or three months earlier than that—within 60 days after the date of the survey.

Mr. ANDERSON. I was going to say that if the information from one of these surveys was not available for four or five months after the survey was made, it would not be of very much use.

Mr. BRAND. As an illustration of how soon the information from the survey of December 31 was available, the percentage of increase or decrease of wheat, flour, corn, sugar, vegetable fats, cottonseed oil, lard and lard compounds, cured hams, bacon and shoulders, pork (fresh, chilled, and frozen), canned meat, canned sausage, and poultry, canned salmon, canned tomatoes, canned corn, and canned peas was available on February 25, and was furnished the Food Administration about that date.

Mr. ANDERSON. That is from the survey of January 1?

Mr. BRAND. Yes; or December 31. The actual information on wheat, flour, stocks, and other grain foods, and cereal foods generally, for April 1 is ready to release to-day. You must remember that the August 31 business, after all, involved the doing of a new task. The law was passed on the 10th of August, and not less than two weeks from that date we had our schedules printed and in the mails, so that the persons could report as of August 31. That involved the starting of machinery that was very difficult to get ready. We had to get several hundred employees together and train them somewhat, and the working out of the details of a matter of this character is anything but a small task, so that it took rather longer on that preliminary survey than it has taken since then.

The CHAIRMAN. And then you released another of April 1, did you not?

Mr. BRAND. To-day we are releasing it.

The CHAIRMAN. And when will you have another?

Mr. BRAND. We shall release about one for every four days from now on.

The CHAIRMAN. On some particular proposition?

Mr. BRAND. Yes, sir. Knowing that the committee would be interested in that matter, I brought with me a statement showing just what those particular things are.

The first is wheat—wheat flour and other wheat products in the United States on April 1, 1917.

Mr. ANDERSON. That is April 1?

Mr. BRAND. That is April 1. The complete report for December 31 will be released this week. That, of course, is a very big task, as I say. We tabulated returns from between 325,000 and 350,000 schedules containing an average of 26 items per schedule. It involved the punching of nearly eight and a half millions of cards, in order to get the information all tabulated.

Mr. ANDERSON. Do you not think that this food survey is expanding over a whole lot of ground that is not very material?

Mr. BRAND. No; I could not say that. After talking with the various foreign missions that have come here of their difficulties because of the lack of sufficient information that they could really rely on, I think it is highly essential ground.

Mr. ANDERSON. I think that is true, providing the information is available sufficiently soon after it is taken, but a large survey which can not possibly become useful for 60 days does not strike me as a very valuable document.

Mr. BRAND. You have to have your large surveys to furnish your base lines for your monthly reports. As to the latter, I do not think you could hope to get anything, as comprehensive as these reports are, in less than 15 days; and we expect to get them in the future in about two weeks. The ones that are ready to be released to-day were finished last Friday.

Mr. ANDERSON. I understood you to say that the full report for December 31 will be available within a day or two?

Mr. BRAND. Yes.

The CHAIRMAN. When will you have another full report?

Mr. BRAND. About June 30.

The CHAIRMAN. And in the meantime——

Mr. BRAND. We get our monthly issues, which will come out anywhere from 8 to 15 days after the date of the reports.

The CHAIRMAN. How does that monthly issue differ from the full report?

Mr. BRAND. It is not as complete, necessarily. It is very complete, relatively, but not as complete as the full report and will cover only the most important items.

Mr. ANDERSON. Your complete report is, then, practically four months behind the date of the surveys?

Mr. BRAND. It is not that, because, as I pointed out, the essential facts were distributed to the persons who could use them as early as the 25th of February, with reference to the largest number and the most important items, and then, with reference to another series of items, on March 26. That included the following: Beans, dry, edible, of all kinds; corn flour and corn meal; all other corn food products, hominy grits, corn breakfast foods, and so forth; rye flour, buckwheat flour; condensed and evaporated milk; onions and cabbages.

Mr. ANDERSON. I take it there is financial information that you gather simply for statistical purposes, and that is all the value that information that is four months old really has, in my judgment—I may be wrong about it—and there is information which you gather for the Food Administration or for administration purposes; but at first blush it does strike me that information which does represent but little more than a mere statistical gathering in of information does not warrant the cost involved in getting it. If I am wrong about that, I would like to have it pointed out.

Mr. BRAND. There are two uses which we have served. The amount of a given stock of food that is eaten by February 25 of these great staples is not extensive, and at any rate we know pretty well what subtractions to make all the time from those figures.

The CHAIRMAN. I was just about to ask you about that. Having your base figures and knowing how much there is on hand at a particular time, and having approximated by your methods the amount of consumption per capita, you ought to be in position to know almost

at any day of the month just how much food we have on hand. Is that true or not? Is that the system?

Mr. BRAND. Yes; that is the system we work upon, and we take our export figures and work them along with that.

The CHAIRMAN. Let me ask you another question. This is an interesting proposition to me, because I have had the same kind of doubt in my mind that Mr. Anderson has expressed here. Take your informal figures. You furnished them immediately to the Food Administration, I take it?

Mr. BRAND. Yes.

The CHAIRMAN. And to the Quartermaster General of the Army and to the purchasing agents, and so on?

Mr. BRAND. We are working with them all the time. Their men are at our offices and our men are at theirs, so that they have this information even before it is fully gotten together.

The CHAIRMAN. Now, another question: In making the complete report which you issue from time to time which involves the larger food products, I take it that you collect those figures for each particular food at the request of the Food Administration and these other branches of the Government?

Mr. BRAND. Certain of them are definitely at their request. For instance, this report on wheat and flour is at the request of their statistical division. They said they had no facilities for getting that together, and they wanted it, and Dr. Pearl asked us specifically to do that.

The CHAIRMAN. I take it that it would be foolish work for you to go to work here and indiscriminately collect a lot of figures on foods that the purchasing branches of the Government are not very much concerned about.

Mr. BRAND. That is true in a general way, although there are fundamental purposes to be served by this information which are wholly aside from its daily and weekly use.

The CHAIRMAN. I can understand how your complete report might go into these important basic facts, but these monthly reports, it seems to me, would confine themselves to these more important foods.

Mr. BRAND. That is true, and we are in frequent touch with the men who are dealing with those products at the Food Administration.

The same is true of butter, eggs, and poultry and things of that sort. These reports are compiled and issued with the greatest possible speed. For instance, our egg report which came out yesterday was compiled from schedules which were returnable April 15. It was actually released on April 24. That may seem slow, but no market news agency in the United States, and possibly in the world, ever issued such a report so promptly. The same remarks might apply to the reports on fish.

Mr. ANDERSON. I am in no way questioning the value of the report which comes out inside of 15 days. The only doubt I expressed was as to the value of the general report that you issue.

Mr. BRAND. The general report is of very great value, because it brings together all of the fragments and gives us a picture of the whole process of distribution. For instance, in preparing our August report we found that we could tell just where sugar was located this year as in comparison with its location last year. We

found that the fear of a shortage had drawn it all out of the warehouses and that it was in the hands of the wholesalers and retailers, and, we suspect, largely in the hands of the consumers as well. In 1916 the warehouses had hundreds of millions of pounds of sugar; in 1917 they were almost bare of sugar. The report shows by comparison the stage of distribution of any one of those products.

The CHAIRMAN. Let us see if we can not get Mr. Anderson's thought a little further here. Mr. Anderson's thought is, as I gather it—and I have had it in my own mind, too—that the expenditure for getting this complete report—this quarterly report, as we will call it, issued about every four months—was larger than the value of the reports would warrant. As I gather from your statement here, it is the thing that the larger part of your appropriation does not go into, getting these complete reports, but that it does go into getting these incomplete monthly reports which you publish from day to day and every 15 days?

Mr. BRAND. The latter, of course, come along seriatim. The same complete surveys furnish the base lines for comparison with the monthly reports.

Mr. ANDERSON. Are those figures worth anything?

Mr. BRAND. Yes; they are worth a great deal, as showing the status with reference to any particular food at any particular date.

Mr. ANDERSON. Are they worth anything on commodities which are not basic, like wheat and flour and rice and fish?

Mr. BRAND. Yes; they are of very great value.

Mr. ANDERSON. I have looked over this report of yours, and it strikes me that there are a whole lot of things in it that are not very important.

Mr. BRAND. Take the matter of lard, regarding which there are some details in the complete report. There are many interests to be served, and while some of these details are not of general interest, they are important in making comparisons for the future in determining policies, and in other ways. For instance, it might seem that there is not much use in issuing a lard report, because a lard report is made by the provision journals. The provision journals themselves, however, consider that the figures we issue on lard are the most complete they have ever seen and of basic importance as offering a comparison by which to check the accuracy of future figures.

Mr. ANDERSON. You get out a seed report?

Mr. BRAND. We get out a seed report.

Mr. ANDERSON. I notice in the seed report you have 79 different kinds of seeds that I never heard of.

Mr. BRAND. Yes?

Mr. ANDERSON. You may have that many different kinds of foods.

Mr. BRAND. Our list of foods was made after consultation with the Food Administration, with the president of the National Wholesale Grocers' Association, who is a member of the Food Administration, and with every other interest worthy of consideration in that connection, including dietetic experts, such as Dr. Alonzo Taylor, of the Food Administration; and Dr. Langworthy, of the Department of Agriculture. The list of foodstuffs compiled after considering all suggestions carefully was altogether too long to be practical; so we

called together a much smaller conference and succeeded in paring it down to 88 items.

The CHAIRMAN. Let me ask another question of Dr. Brand, if you will permit me to do it, Mr. Anderson?

Mr. ANDERSON. Certainly.

The CHAIRMAN. I did not quite finish a while ago. Could you approximate what proportion of this appropriation goes into the gathering of your basic reports, and what proportion goes into the gathering of these intermediate reports?

Mr. BRAND. I should say that in the past, while we were establishing the work, possibly as much as half. In the future there will be not nearly that much, because we have established a basis for future work and will use practically the same machinery in getting out these monthly reports that we have heretofore used in issuing the larger reports. With the chairman's permission, a statement regarding the food surveys will be inserted.

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF MARKETS,
Washington, D. C., May 1, 1918.

Hon. A. F. LEVER,
House of Representatives.

DEAR MR. LEVER: In accordance with my verbal promise I am submitting herewith a statement outlining the purposes of the more comprehensive food surveys and the results obtained from them.

The possession of comprehensive and accurate information obtained from time to time and as promptly as possible as to our food supply, its ownership, control, and location, is essential for the guidance of governmental agencies and the public in making plans for increasing production, for promoting efficient distribution, and for effectively directing conservation and utilization.

The obtaining of the desired results requires four classes of information: (*a*) Stocks on hand on farms; (*b*) stocks in wholesale, jobbing, storing, manufacturing, exporting, and other commercial establishments; (*c*) stocks in retail establishments; and (*d*) consumers' stocks.

As to each of the important foods or food materials it was necessary to determine:

(1) The available supply;
(2) Its location, both as to place and as to classes of holders;
(3) The rate of its consumption; and
(4) The extent of available substitutes.

The questions involved will be discussed under these four headings.

(1) THE AVAILABLE SUPPLY.

In order to determine the available supply of any food commodity on a given date it is necessary to investigate the stocks held by all classes of commercial concerns on that date, as well as the stocks on farms and in households. The food-production and food-survey act was approved by the President on August 10, 1917. A comprehensive preliminary survey, covering 18 of the most essential items of food, was made for August 31, 1917. The results of this survey are shown in six circulars, as follows:

No. 96. Sugar supply of the United States: Its extent and distribution on August 31, 1917.

No. 97. The supply of lard in the United States: Its extent and distribution on August 31, 1917.

No. 98. The supply of canned salmon in the United States: Its extent and distribution on August 31, 1917.

No. 99. Commercial stocks of miscellaneous cereal and vegetable foodstuffs in the United States on August 31, 1917.

No. 100. Commercial stocks of wheat and wheat flour in the United States on August 31, 1917.

No. 101. Commercial stocks of miscellaneous animal-food products in the United States on August 31, 1917.

A more comprehensive survey, covering 86 important foods and food materials, was undertaken for the date December 31, 1917. The final results of this survey are at hand and will be published at intervals of a few days beginning this week.

Certified information was secured from 80 classes of business concerns, as shown on the accompanying exhibit, entitled "Class of business code list." (Exhibit 1.) A copy of the schedule used for the December 31 inventory is also attached hereto. (Exhibit 2.)

The survey schedule was prepared after thorough conferences with most, if not all, of the interests affected including mills, elevators, wholesale and retail stores, common and cold storage concerns, food manufacturers and others. Messrs. Alonzo Taylor, C. F. Langworthy, and C. L. Alsberg; also Theodore Whitmarsh, Frank Horne, and other representatives of the Food Administration, and Prof. Sherman, of Columbia University, were consulted in the preparation of the schedule. Copies thereof with the accompanying sheet (Exhibit 3) were sent by mail to upward of 600,000 business concerns throughout the United States.

It was found impracticable to obtain a complete inventory of the smaller retail concerns by mail. Therefore intensive surveys covering every retail enterprise were made by personal canvass in a selection of about 40 representative counties and cities in the United States. These will furnish a basis for a relatively accurate estimate so that all retail concerns will be covered. Retail concerns in New York City and certain other selected typical cities were inventoried in like detail.

Approximately 350,000 schedules in all were received from commercial concerns. An average of about 26 items was reported per schedule. Over 9,000,000 cards were required in tabulating the data, whose value will be more apparent after a discussion of the many questions that were considered in planning and conducting these food surveys. Through the voluntary assistance of numerous officers of the States Relations Service, teachers of home economics and sociology in the colleges and universities, and other persons information has been obtained from about 25,000 families with reference to household stocks and household consumption. An effort was made to select families that would be representative with reference to residence, occupation, and income in order that a fair average as a basis for estimates for the entire country might be obtained.

Detailed dietary surveys for more than 1,500 families will be secured. As practically all dietary discussion of the present time is based upon Langworthy's revision of Atwater's figures covering a total of only 400 families it is apparent that the dietary survey will yield more complete, detailed, and accurate information than has ever been available.

(2) LOCATION OF FOOD SUPPLY AS TO PLACE AND AS TO CLASSES OF HOLDERS.

It is important to know not only what the total stocks of a given commodity might be but also the amount of it that was held by each of the important classes of business concerns and the general distribution of the commodity throughout the country. The data obtained have accordingly been assembled by important groups and classes of business concerns, and the data for each group and class of concerns are shown by States and by geographic divisions as well as for the entire country.

The importance of knowing the particular hands in which the available supply of a given commodity is located is illustrated in the case of sugar. On August 31, 1917, the sugar and sirup mills and refineries held nearly 481,000,000 pounds, which was 46.3 per cent of the total commercial supply, whereas on the same date in 1916 they held over 660,000,000 pounds, which was 46.2 per cent of the supply for that date and year. In contrast, the storage warehouses on August 31, 1917, held 146,728,000 pounds, or 14.1 per cent, of the available supply, while on the same date in 1916 they held 428,077,000 pounds, which was 29.9 per cent of the available supply. The wholesale grocers, on August 31, 1917, held 207,398,000 pounds, or 20 per cent, of the total available supply, while on August 31, 1916, they had in hand only 166,961,000 pounds, or 11.7 per cent, of the total available supply. From the wholesale grocers on each class of dealers held a larger per cent on August 31, 1917, than they did on August 31, 1916. Only when we know definitely the hands in which the supply is located can we deal intelligently with the problems involved in its equitable distribution.

The value of having the information by classes of business may also be illustrated by the following: In early February the Bureau of Markets received a request from Mr. Richard Dickinson, of the United States Food Administration, for a list of the leading canneries and wholesale grocers, together with their stocks of canned tomatoes, peas, corn, and salmon on hand on December 31, 1917. The information requested was compiled and submitted in a statement to Mr. E. O. Heyl, Division of Coordination of Purchase. This statement, which covered 16 typewritten pages, included 132 of the largest canneries and 173 leading wholesale grocers, together with the stocks held of the above-mentioned commodities. In acknowledging receipt of this material, Mr. Heyl stated that it would be most useful just at that time and expressed his hearty thanks.

In general, it may be stated that previous to the making of the food surveys authoritative information has not been available regarding the relative amount of any given commodity held in the different channels of trade. Moreover, in the absence of such survey information, it has been impossible to determine what classes of concerns held the bulk of the stocks and how far, therefore, it was necessary to go in the collection of such data in order to have an accurate idea of comparative changes in the total commercial stocks of the country.

(3) THE RATE OF CONSUMPTION.

It is assumed that the most important question in connection with our food supply is that of determining how far the available supply will be sufficient to meet all needs at the present rate of consumption. It is evident that this could not be ascertained unless the total available supply were first determined.

The following explanation will show the method followed in arriving at the rate of consumption for a given commodity: A glance at the survey schedule (Exhibit 2) will show that the stocks were obtained not only for December 31, 1917, but also for the corresponding date in 1916. Replies for both dates were received on 85 per cent of all schedules tabulated, and it is believed that these reflected fairly accurately the comparative holdings of the two dates and, when taken in connection with the total figures reported for December 31, 1917, made it possible also to determine the estimated total stocks on hand for December 31, 1916. Having determined the stock on hand both at the beginning and at the end of the year, it is possible to add the earlier inventory to the production for the year, then to add the imports and subtract the exports, and finally to subtract the inventory at the close of the year in order to determine the amount of consumption during the year.

The estimated number of the existing population being known, the per capita consumption for the year could also be determined. In the survey for August 31, 1917, it was found that the per capita use of sugar for all purposes from August 31, 1916, to August 31, 1917, was 88.3 pounds. This is the first time that any basis has been furnished for determining the actual rate of consumption of sugar in the United States.

The same general plan would be followed in determining the rate of consumption for each of the other commodities where production could be ascertained. The comprehensive survey of December 31, 1917, will make it possible thus to determine the rate of consumption during the calendar year 1917, and, taken in connection with the figures for August 31, 1917, the rate of consumption from August 31, to December 31, 1917. The survey planned for July 1, 1918, will make it possible further to determine the rate of consumption from January 1, to July 1, 1918, as well as for the year ending July 1, 1918. Such facts would appear to be of the utmost importance in the present war situation, especially in showing how far the conservation of our food supply was being properly maintained. In the absence of such data we have no reliable basis for judging the effectiveness of any food conservation policies that may be applied.

(4) THE EXTENT OF AVAILABLE SUBSTITUTES.

A glance at the 86 items on the food-survey schedule of December 31, 1917, will show that this list includes not only the most important items of foods and food materials but also a considerable number of relatively less important items. The schedule as finally adopted shows a material reduction in the number of items compared with the list originally suggested by those affected. There is doubtless room for difference of opinion as to how many items should properly have been included in such a survey. The list of 86 items finally

adopted reflected in the main a consensus of opinion among all who participated in the conferences. It was realized that less important items should be included because the information obtained would be helpful in the shaping of any policy that might be necessary in encouraging the use of food substitutes.

An illustration of this is to be found in the case of the existing supply of wheat flour, which requires the use of wheat-flour substitutes, including corn flour and corn meal, rye flour, buckwheat flour, etc. In this connection it may be added that a special survey covering the existing stocks of wheat-flour substitutes as well as those of wheat flour and important grains was made as for April 1, 1918, at the suggestion of Dr. Pearl, of the United States Food Administration, and that information regarding the comparative stocks of these commodities in the hands of elevators, grain warehouses, general warehouses, grain mills, and wholesale grain dealers throughout the country has been determined for that date and reported to the Food Administration.

Another illustration is furnished in the case of condensed and evaporated milk. The department was recently called upon to furnish such information to the War Trade Board. We were in a position to furnish information regarding the available supply of condensed and evaporated milk which has assisted the War Trade Board in determining its policy in regard to the exports of this commodity.

One important reason for making the food surveys was to determine how far the supplies of important commodities could be spared for the Allies. In this connection I may say that one of the officers of the Food Administration, who went abroad recently as their official representative, requested the food survey section to furnish him information regarding the stocks of certain meats and meat products in the United States. After these data had been furnished him he stated that he had received just the kind of information he needed.

In conclusion, I know of no way in which it will be possible to determine the available supply of the important foods and food materials, their distribution, rate of consumption, and the available supply of food substitutes without the aid of thorough, comprehensive food surveys showing the total stocks of the country for the two inventory periods in the manner obtained in the food surveys of the Department of Agriculture.

Very truly, yours,

CHARLES J. BRAND,
Chief of Bureau.

EXHIBIT 1.

CLASS OF BUSINESS CODE LIST—NUMERICAL ORDER.

1. Cooperative agency.
2. Grain elevator.
3. Grain miller.
4. Wholesale grain dealer.
5. Retail grain dealer.
6. Prop. feed manufacturer.
7. Alfalfa mill.
8. Seedsman.
9. Distiller.
10. Brewer.
11. Rice mill.
12. Rice elevator.
15. Peanut clearer.
18. Drier of fruits and vegetables.
19. Canner of fruits and vegetables.
23. Miscellaneous manufacturers.
24. Canner of meats.
25. Canner of fish.
26. Canner of soups.
27. Oleo renderer.
28. Oil mill.
29. Oil jobber.
30. Soap manufacturer.
31. Linseed-oil manufacturer.
36. Peanut-butter manufacturer.
37. Coconut-butter manufacturer.
38. Cane-sugar mill.
39. Cane-sugar refinery.
40. Beet-sugar mill.
41. Sirup mill.
45. Baker.
46. Confectioner.
47. Fruit-sirup manufacturer.
48. Soda-fountain supply jobber.
49. Spice mill.
51. Tea and coffee jobber.
52. Macaroni manufacturer.
53. Cornstarch manufacturer.
54. Cereal-food manufacturer.
55. Manufacturer of preserves.
56. Chewing-gum manufacturer
57. Pickle manufacturer.
58. Gelatin manufacturer.
59. Fish-freezing plant.
60. Fish packer (salt).
61. Wholesale fish dealer.
62. Lard renderer.
63. Meat packer.
64. Slaughterer.
65. Sausage factory.

CLASS OF BUSINESS CODE LIST—NUMERICAL ORDER—continued.

66. Lard-compound manufacturer.
67. Oleomargarine manufacturer.
68. Meat and provision jobber.
69. Poultry packer.
70. Poultry shipper.
71. Wholesale dealer in butter, etc.
73. Retail fish market.
75. Wholesale dealer in fruits and vegetables.
76. Molasses jobber.
77. Merchandise broker.
78. Wholesale grocer.
79. Exporter.
81. Commissary (feeding).
82. Public institution.
83. Creamery.
84. Milk condensery.
85. Cheese factory.
86. Dried-milk plant.
87. Casein plant.
88. Butter renovator.
89. Ice-cream manufacturer.
90. Milk plant.
91. Commissary (selling).
92. Hotel or restaurant.
93. Retail grocer.
94. Retail meat market.
95. General store.
96. Chain grocery store.
97. Cold storage.
98. Warehouse.

EXHIBIT 2.

UNITED STATES DEPARTMENT OF AGRICULTURE WAR EMERGENCY FOOD SURVEY.

Section 2 of an act of Congress [Public No. 40, 65th Congress] approved August 10, 1917, provides as follows:

"Sec. 2. That the Secretary of Agriculture, with the approval of the President, is authorized to investigate and ascertain the demand for, the supply, consumption, costs, and prices of, and the basic facts relating to the ownership, production, transportation, manufacture, storage, and distribution of foods, food materials, feeds, seeds, fertilizers, agricultural implements and machinery, and any article required in connection with the production, distribution, or utilization of food. It shall be the duty of any person, when requested by the Secretary of Agriculture, or any agent acting under his instructions, to answer correctly, to the best of his knowledge, under oath or otherwise, all questions touching his knowledge of any matter authorized to be investigated under this section, or to produce all books, letters, papers, or documents in his possession, or under his control, relating to such matter. Any person who shall, within a reasonable time, to be prescribed by the Secretary of Agriculture, not exceeding thirty days from the date of the receipt of the request, willfully fail or refuse to answer such questions or to produce such books, letters, papers, or documents, or who shall willfully give any answer that is false or misleading, shall be guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine not exceeding $1,000 or by imprisonment not exceeding one year, or both."

The possession of comprehensive facts as to our food supply, its ownership and control, is essential for the guidance of governmental agencies and the public in making plans for increasing production, for promoting efficient distribution, and for directing conservation and utilization. Therefore, you are hereby requested, and are required by the above-mentioned law, under the penalties therein provided, to fill out and mail or deliver the following schedule, in accordance with the instructions below and accompanying this request. This schedule should be mailed or delivered to the Chief of the Bureau of Markets, at Washington, D. C., as soon as possible after December 31, 1917. If received by you not later than January 1, 1918, it must be mailed or delivered not later than January 10, 1918. If received by you after January 1, 1918, it must be mailed or delivered not later than ten days after the date of its receipt.

D. F. HOUSTON,
Secretary of Agriculture.

INSTRUCTIONS—READ CAREFULLY.

1. Read this entire schedule before putting down any figures. It must be filled out and returned.

2. Enter in each column headed "Stock on hand December 31, 1917," the quantity of each commodity named in the preceding col-

umn headed "Commodity" which you have on hand December 31, 1917; and in each column headed "Stock on hand December 31, 1916," the quantity which you had on hand December 31, 1916—one year ago. These figures must be based on inventories or records, as far as possible. Where inventories or records are not available, the best possible estimate must be made. Figures for 1916 are essential for comparative purposes.

3. All quantity figures must be stated in the unit of weight or measure specified on the schedule. Include all stocks on hand, whether owned by you or not.

4. If there is any commodity listed which you usually handle, but which is not in stock on December 31, 1917, or was not in stock on December 31, 1916, write "Out" in the proper column for that commodity. For a commodity which you never handle, do not write "None"—leave the space blank.

5. In the column under the heading "Estimated quantity in transit," enter for each commodity the total quantity which you have recently shipped and which you believe has not been delivered to the purchaser or consignee before the close of business on December 31. Even if the goods are expected to be delivered as early as the next day, they should be included. Include shipments of your stock from public warehouses and public cold-storage houses, as well as shipments from your own place of business. This column is to be filled in only by concerns that ship out goods by freight or express.

6. Public warehouses and public cold-storage warehouses must report their entire holdings of the products listed on this schedule (except those in private compartments), whether such stocks are the property of the storage houses or of their clients. They need not give the approximate total value asked for in question 3 on the fourth page. All other persons and concerns must include in their reports all stocks in private warehouses and private cold-storage space, and stocks in private compartments in public warehouses and public cold-storage warehouses, but must not include any other stocks in public warehouses or public cold-storage warehouses.

7. Brokers or commission merchants having stocks on hand, whether such stocks are owned by them or by their clients, must report the stocks.

8. Blanks have been sent to all branch and subsidiary establishments so far as known. Main offices must instruct the managers of branch and subsidiary establishments immediately to fill out the schedules, or must notify such managers that the schedules will be filled out at the main office. A separate schedule must be filled out for each branch or subsidiary establishment and for the main office, except that those in any one city may be reported on a single schedule. Every main office must also give a complete list of the branch houses correctly named, with the location of each. Care must be taken not to report any stock more than once.

9. The schedule when filled out must be signed by some responsible person duly authorized to do so. If the business for which the answers are made is owned by an individual, the owner must sign unless absent or incapacitated, in which case the manager or other person in charge must do so and state why the owner did not. In the

case of a partnership a member must sign. In the case of an association or corporation an officer duly authorized for the purpose, or the general manager, if so authorized, must sign. In the case of a branch or subsidiary establishment, the manager, if authorized, may sign, but in such instances the main office will be held responsible for the answers of the branch or subsidiary establishments.

10. This schedule must be filled out completely, regardless of any information which you may previously have given to departments or agencies of the Federal or State Governments. If you do not carry stocks of any of the items listed, the schedule must be returned with a statement to this effect. For the return of your schedule an addressed official envelope, which requires no postage, is inclosed.

11. Failure or refusal an answer as requested is punishable by a fine not exceeding $1,000, or imprisonment not exceeding one year, or both. It is expected, however, that all individuals, partnerships, associations, and corporations will consider it their patriotic duty to fill out and return the schedules as requested.

Food survey schedule of Dec. 31, 1917.

(Give all quantities in the unit of weight or measure specified. Include all stocks on hand, whether owned by you or not.)

Special notes.	Commodity.	Stock on hand Dec. 31, 1917.	Stock on hand Dec. 31, 1916.		Estimated quantity in transit from you Dec. 31, 1917.[1]
GRAINS AND SEEDS. Give all quantities of grains and seeds (items 1 to 11, inclusive) in bushels, omitting any fractions or any odd pounds. Do not give the quantities of such commodities in pounds, tons, or cars, nor in such indefinite units as bags or sacks.	1. Wheat	....bu.	1	....bu.	.....bu.
	2. Corn	....bu.	2	....bu.	.....bu.
	3. Oats	....bu.	3	....bu.	.....bu.
	4. Barley	....bu.	4	....bu.	.....bu.
	5. Rye	....bu.	5	....bu.	.....bu.
	6. Grain sorghums—kafir, milo, etc	....bu.	6	....bu.	.....bu.
	7. Rice, rough	....bu.	7	....bu.	.....bu.
	8. Buckwheat	....bu.	8	....bu.	.....bu.
	9. Beans, dry, edible—all kinds	....bu.	9	....bu.	.....bu.
	10. Cowpeas	....bu.	10	....bu.	.....bu.
	11. Peas and lentils (including all dry peas except cowpeas).	....bu.	11	....bu.	.....bu.
	12. Wheat flour, patents and straights	....bbls.	12	..bbls.	.....bbls.
	13. Wheat flour, first and second clear	....bbls.	13	..bbls.	.....bbls.
	14. Wheat flour, low grades	....bbls.	14	..bbls.	.....bbls.
GRAIN FOOD PRODUCTS. Give all quantities of flour (items 12, 13, 14, 15, and 17) in barrels, omitting fractions or odd pounds. If the flour is in bags, packages, etc., do not report the number of these, but convert the quantity into barrels by dividing the total number of pounds by 196. Give all quantities of items 16 and 18 to 23, inclusive, in pounds. Reduce all packages, of whatever size, to pounds of 16 ounces.	15. Whole-wheat and graham flour	....bbls.	15	..bbls.	.....bbls.
	16. Other wheat food products—wheat breakfast foods, macaroni, spaghetti, noodles, etc.	.....lbs.	16	...lbs.	.....lbs.
	17. Rye flour	....bbls.	17	..bbls.	.....bbls.
	18. Corn flour, and corn meal suitable for human food.	.....lbs.	18	...lbs.	.....sb.
	19. Other corn food products—hominy, grits, corn breakfast foods, etc	.....lbs.	19	...lbs.	.....lbs.
	20. Buckwheat flour	.....lbs.	20	...lbs.	.....lbs.
	21. Rice, cleaned or milled	.....lbs.	21	...lbs.	.....lbs.
	22. Rolled oats and oatmeal	.....lbs.	22	...lbs.	.....lbs.
	23. Bakery products— bread, crackers, cakes, wafers, etc.	.....lbs.	23	...lbs.	.....lbs.

[1] If you handle a commodity, but have none in transit from you on Dec. 31, write "None" opposite that commodity. Leave spaces blank opposite commodities which you do not ship out.

Food survey schedule of Dec. 31, 1917—Continued.

Special notes.	Commodity.	Stock on hand Dec. 31, 1917.	Stock on hand Dec. 31, 1916.	Estimated quantity in transit from you Dec. 31, 1917.
MEATS AND MEAT PRODUCTS. Give all quantities of meats and meat products (items 24 to 34, inclusive) in pounds. Do not state merely the number of hams, sides of bacon, shoulders or sides of beef which you have in stock; nor the number of packages or cases of gelatin; give the weight in pounds for every such item.	24. Beef—fresh, chilled and frozen	.....lbs.	24 ...lbs.	.....lbs.
	25. Pork—fresh, chilled and frozen	.....lbs.	25 ...lbs.	.....lbs.
	26. Veal—fresh, chilled and frozen	.....lbs.	26 ...lbs.	.....lbs.
	27. Mutton, lamb and goat meat—fresh, chilled and frozen.	.....lbs.	27 ...lbs.	.....lbs.
	28. Dressed poultry and game—fresh and frozen.	.....lbs.	28 ...lbs.	.....lbs.
	29. Live poultry in the hands of dealers	.....lbs.	29 ...lbs.	.....lbs.
	30. Salted and cured beef—including pickled, corned, dried, etc.	.....lbs.	30 ...lbs.	.....lbs.
	31. Cured hams, bacon and shoulders sweet-pickled, dry-salted, or smoked.	.....lbs.	31 ...lbs.	.....lbs.
	32. Other cured and salted pork	.....lbs.	32 ...lbs.	.....lbs.
	33. All other meats not canned—tongues, kidneys, livers, sausages, scrapple, etc.	.....lbs.	33 ...lbs.	.....lbs.
	34. Gelatin intended for food, including flavored gelatin.	.....lbs.	34 ...lbs.	.....lbs.
FISH. Give all quantities of fish in pounds, not in kegs, kits, etc.	35. Fresh and frozen fish	.....lbs.	35 ...lbs.	.....lbs.
	36. Dried fish—dry-salted, smoked, etc	.....lbs.	36 ...lbs.	.....lbs.
	37. Fish in brine	.....lbs.	37 ...lbs.	.....lbs.
FATS, ANIMAL AND VEGETABLE. Give all quantities of items 38, 39, 40, and 41 in pounds. Give all quantities of items 42, 43, and 44 in gallons. Where oil is in bottles, with the number of fluid ounces on the labels, find gallons by dividing the total fluid ounces by 128.	38. Lard	.....lbs.	38 ....lbs.	.....lbs.
	39. Lard compounds and lard substitutes (excluding purely vegetable substitutes)	.....lbs.	39 ....lbs.	.....lbs.
	40. Solid vegetable cooking fats (labels will indicate whether vegetable or not)	.....lbs.	40 ....lbs.	.....lbs.
	41. Oleo stock, oil and edible tallow	.....lbs.	41 ....lbs.	.....lbs.
	42. Cottonseed oil, excluding any not suitable for human food	.....gals.	42 ...gals.	.....gals.
	43. Olive oil	.....gals.	43 ...gals.	.....gals.
	44. Peanut oil	.....gals.	44 ...gals.	.....gals.
DAIRY AND RELATED PRODUCTS. Give items 45, 46, 50, 51, 52, 53, 54, and 55 in pounds. Do not report merely the number of packages, cases, etc. Report items 47 and 48 in gallons and item 49 in dozens. Where commodities are in small packages, cans, etc., find number of pounds by dividing total ounces by 16.	45. Butter—dairy, creamery, ladled, renovated, etc	.....lbs.	45 ....lbs.	.....lbs.
	46. Cheese—all kinds	.....lbs.	46 ....lbs.	..... lbs.
	47. Cream, natural and frozen	.....gals.	47 ...gals.	.....gals.
	48. Ice cream	.....gals.	48 ...gals.	.....gals.
	49. Eggs	.....doz.	49 ...doz.	.....doz.
	50. Frozen eggs	.....lbs.	50 ....lbs.	.....lbs.
	51. Dried eggs and egg albumen	.....lbs.	51 ....lbs.	.....lbs.
	52. Dried milk and milk powder	.....lbs.	52 ....lbs.	.....lbs.
	53. Margarine—oleomargarine, butterine, etc.	.....lbs.	53 ....lbs.	.....lbs.
	54. Peanut butter	.....lbs.	54 ....lbs.	.....lbs.
	55. Condensed and evaporated milk	.....lbs.	55 ....lbs.	.....lbs.
CANNED GOODS. Give all quantities of canned goods in pounds. To obtain the quantities of canned goods in pounds, divide the total number of ounces in all cans (ounces are stated on the label) by 16. Preserves, etc., in large containers, as well as those in cans or glass jars, must be reported under item 66.	56. Canned meat, canned sausage, and canned poultry.	.....lbs.	56 ....lbs.	.....lbs.
	57. Canned soup	.....lbs.	57 ....lbs.	.....lbs.
	58. Canned salmon	.....lbs.	58 ....lbs.	.....lbs.
	59. Canned sardines	.....lbs.	59 ....lbs.	.....lbs.
	60. Canned tomatoes	.....lbs.	60 ....lbs.	.....lbs.
	61. Canned corn	.....lbs.	61 ....lbs.	.....lbs.
	62. Canned peas	.....lbs.	62 ....lbs.	.....lbs.
	63. Canned baked beans	.....lbs.	63 ....lbs.	.....lbs.
	64. Other canned vegetables—string beans, lima beans, pumpkin, asparagus, etc.	.....lbs.	64 ....lbs.	.....lbs.
	65. Canned fruits and berries	.....lbs.	65 ....lbs.	.....lbs.
	66. Preserves, marmalades, jellies, crushed fruits, and fruit sirups.	.....lbs.	66 ....lbs.	.....lbs

Food survey schedule of Dec. 31, 1917—Continued.

Special notes.	Commodity.	Stock on hand Dec. 31, 1917.	Stock on hand Dec. 31, 1916.	Estimated quantity in transit from you Dec. 31, 1917.
FRUITS AND VEGETABLES. Give the quantities of apples in bushels, omitting any fractions or any odd pounds. Give all vegetables in pounds. Do not use such units as boxes, bags, or barrels.	67. Apples	....bu.	67 ....bu.	.....bu.
	68. Irish potatoes	....lbs.	68 ....lbs.	.....lbs.
	69. Sweet potatoes and yams	....lbs.	69 ....lbs.	.....lbs.
	70. Onions	....lbs.	70 ....lbs.	.....lbs.
	71. Cabbage	....lbs.	71 ....lbs.	.....lbs.
	72. Carrots	....lbs.	72 ....lbs.	.....lbs.
	73. Turnips and rutabagas	....lbs.	73 ....lbs.	.....lbs.
DRIED FRUITS, NUTS, AND PEANUTS. Give the quantities of all dried fruit, nuts, and peanuts in pounds. Do not use such indefinite units as boxes, cases, barrels, bags, or packages, and do not report peanuts in bushels.	74. Raisins, currants, figs, and dates	....lbs.	74 ....lbs.	.....lbs.
	75. Prunes	....lbs.	75 ....lbs.	.....lbs
	76. Other dried or evaporated fruits and berries	....lbs.	76 ....lbs.	.....lbs.
	77. Nuts, whole	....lbs.	77 ....lbs.	.....lbs.
	78. Nut meats (shelled nuts)	....lbs.	78 ....lbs.	.....lbs.
	79. Peanuts, unshelled	....lbs.	79 ....lbs.	.....lbs.
	80. Peanuts, shelled	....lbs.	80 ....lbs.	.....lbs.
SUGAR, STARCHES, ETC. Give quantities of items 81, 84, 85, and 86 in pounds. Give quantities of items 82 and 83 in gallons. If gallons or fractions of gallons of molasses or sirup in cans are not shown on labels, convert pounds to gallons by dividing total number pounds by 12.	81. Sugar—all kinds	....lbs.	81 ....lbs.	.....lbs.
	82. Sirup—cane, sorghum, corn, maple, etc	....gals.	82 ...gals.	.....gals.
	83. Molasses, excluding any not suitable for human food	....gals.	83 ...gals.	.....gals.
	84. Honey	....lbs.	84 ....lbs.	.....lbs.
	85. Candies	....lbs.	85 ....lbs.	.....lbs.
	86. Tapioca, sago, cornstarch, and other food starches	....lbs.	86 ....lbs.	.....lbs.

1. What is your principal business? _____
2. Is your concern an individual, partnership, association, or corporation? _____

3. Give the approximate total value (at current cost prices) of the commodities on hand December 31, 1917, reported on this schedule. This information is essential in the classification of the returns. $_____.
4. Where are your present stocks of foodstuffs located? (If part are in one city and part in another, describe the situation fully.) _____

5. Have you any branch or subsidiary establishments? _____. If so, give a complete list, with the name and location of each. (Use separate sheet if necessary.)

6. Are you inclosing reports for any branches herewith? _____. Or will your branches report direct? _____
7. Are you connected, as a branch or subsidiary establishment, with any larger organizations? _____. If so, give the name and location of your main office.

I certify that the answers to the questions in the foregoing schedule are true and complete to the best of my information, knowledge, and belief.

_____ (Name of person signing.)

_____ (Name of position or connection with concern.)

_____, 1918. (Date.)

_____ (Name of concern.)

_____

_____

X

Schedule No. _____

EXHIBIT 3.

WAR EMERGENCY FOOD SURVEY.

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF MARKETS,
Washington, D. C., December 1, 1917.

In accordance with the notice that appears at the head of the accompanying War Emergency Food Survey schedule, a comprehensive investigation or survey is to be made of the Nation's food supply as of December 31, 1917. The general plan which was used in conducting the preliminary survey of August 31 will be followed.

The information requested in the accompanying schedules refers to commercial stocks and not to the holdings of any individual for his personal or family needs. Every manufacturing, mercantile, storing, or other business concern, whether individual, partnership, association, or corporation, having on hand at the close of business December 31, 1917, any raw, partly manufactured, or completely manufactured foods or food materials, whether owned by such concern or not, is required to answer the questions contained in the schedule.

Hotels, restaurants, commissaries of railroads, steamboat companies and industrial concerns, schools, colleges, hospitals, sanitariums, correctional and other public institutions, and other large users of foods and food materials are required to report their holdings if their stocks on hand have a total value at current cost price of $250 or over.

Persons required to report can obtain copies of the schedule from the Bureau of Markets, Washington, D. C., or from the branch offices of the Bureau of Markets, or from field agents in marketing enumerated below.

CHARLES J. BRAND,
Chief of Bureau.

PLACES WHERE SCHEDULES MAY BE OBTAINED.

Alabama: Bureau of Markets, 808–809 Jefferson County Savings Bank Building, Birmingham, Ala.
Arizona: Bureau of Markets, Water Users' Building, Phoenix, Ariz.
Arkansas: Office of Federal Grain Supervision, 503 Metropolitan Bank Building, New Orleans, La.
California:
- Office of Federal Grain Supervision, 1131 Merchants Exchange, San Francisco, Cal.
- Bureau of Markets, 524 Post Office Building, Los Angeles, Cal.

Colorado:
- Office of Federal Grain Supervision, 509 Cooper Building, Denver, Colo.
- Bureau of Markets, Room 26, Customhouse, Denver, Colo.
- Bureau of Markets, 901 Railroad Avenue, Rocky Ford, Colo.

Connecticut: Field Agent in Marketing, Connecticut Agricultural College, Storrs, Conn.
Delaware: Office of Federal Grain Supervision, 578 Bourse Building, Philadelphia, Pa.
District of Columbia: Bureau of Markets, Washington, D. C.
Florida: Bureau of Markets, 909–911 Bisbee Building, 41–43 West Forsyth Street, Jacksonville, Fla.
Georgia:
- Field Agent in Marketing, Georgia State College of Agriculture, Athens, Ga.
- Office of Federal Grain Supervision, 1710 Third National Bank Building, Atlanta, Ga.
- Bureau of Markets, 416 Connally Building, Atlanta, Ga.

Idaho: Office of Federal Grain Supervision, 516 Chamber of Commerce, Spokane, Wash.
Illinois:
- Office of Federal Grain Supervision, Room 6, Post Office Building, Cairo, Ill.
- Office of Federal Grain Supervision, Room 974, 208 South La Salle Street, Chicago, Ill.
- Bureau of Markets, Room 3, 817 Exchange Avenue, Union Stock Yards, Chicago, Ill.
- Bureau of Markets, 59 Board of Trade, Chicago, Ill.
- Bureau of Markets, Room 602, Distributors Building, 236 North Clark Street, Chicago, Ill.
- Office of Federal Grain Supervision, 509 Lehmann Building, Peoria, Ill.

Indiana:
Field Agent in Marketing, Purdue University, Lafayette, Ind.
Office of Federal Grain Supervision, 827 Board of Trade Building, Indianapolis, Ind.
Iowa: Field Agent in Marketing, Iowa State College of Agriculture, Ames, Iowa.
Kansas: Office of Federal Grain Supervision, 313 Sedgwick Building, Wichita, Kans.
Kentucky:
Office of Federal Grain Supervision, 27 Board of Trade Building, Louisville, Ky.
Field Agent in Marketing, College of Agriculture, University of Kentucky, Lexington, Ky.
Louisiana:
Office of Federal Grain Supervision, 503 Metropolitan Bank Building, New Orleans, La.
Bureau of Markets, Room 307, Abraham Cotton Building, New Orleans, La.
Maine: Bureau of Markets, Room 1806, Customhouse Tower, Boston, Mass.
Maryland:
Office of Federal Grain Supervision, 409 Garrett Office Building, Baltimore, Md.
Bureau of Markets, Room 411, Customhouse, Baltimore, Md.
Massachusetts:
Office of Federal Grain Supervision, Room 1140, 141 Milk Street, Boston, Mass.
Bureau of Markets, Room 1806, Customhouse Tower, Boston, Mass.
Bureau of Markets, 510 Fidelity Building, Boston, Mass.
Michigan:
Office of Federal Grain Supervision, 314 Holden Building, 211 Griswold Street, Detroit, Mich.
Bureau of Markets, 404 New Telegraph Building, 72 Shelby Street, Detroit, Mich.
Field Agent in Marketing, Division of Markets, Michigan Agricultural College, East Lansing, Mich.
Minnesota:
Office of Federal Grain Supervision, 309 Glencoe Building, Duluth, Minn.
Office of Federal Grain Supervision, 326 Flour Exchange, Minneapolis, Minn.
Bureau of Markets, Room 300, Market State Bank Building, Minneapolis, Minn.
Field Agent in Marketing, College of Agriculture, University of Minnesota, University Farm, St. Paul, Minn.
Bureau of Markets, 523 Live Stock Exchange, St. Paul, Minn.
Mississippi: Office of Federal Grain Supervision, 503 Metropolitan Bank Building, New Orleans, La.
Missouri:
Office of Federal Grain Supervision, 310 Postal Telegraph Building, Kansas City, Mo.
Bureau of Markets, Rooms 203–205 Produce Exchange Building, Kansas City, Mo.
Bureau of Markets, 657 Livestock Exchange, Kansas City, Mo.
Bureau of Markets, Rooms 400–401 Old Customhouse, Third and Olive Streets, St. Louis, Mo.
Office of Federal Grain Supervision, 413 United States Appraisers Stores Building, St. Louis, Mo.
Montana: Field Agent in Marketing, Montana State College of Agriculture and Mechanic Arts, Bozeman, Mont.
Nebraska:
Field Agent in Marketing, College of Agriculture, University of Nebraska, Lincoln, Nebr.
Office of Federal Grain Supervision, 738 Brandeis Building, Omaha, Nebr.
Bureau of Markets, Box 184, South Side Station, Omaha, Nebr.
Bureau of Markets, 506–507 Farnam Building, Thirteenth and Farnam Streets, Omaha, Nebr.
Nevada: Office of Federal Grain Supervision, 1131 Merchants Exchange, San Francisco, Cal.

New Hampshire: Bureau of Markets, Room 1806, Customhouse Tower, Boston, Mass.
New Jersey: Bureau of Markets, Room 315, Insurance Exchange Building, Philadelphia, Pa.
New Mexico: Bureau of Markets, Water Users' Building, Phoenix, Ariz.
New York:
Office of Federal Grain Supervision, 98 Dun Building, Buffalo, N. Y.
Bureau of Markets, Room 232, Post Office Building, Buffalo, N. Y.
Office of Federal Grain Supervision, Room 1607, 27 William St., New York City.
Bureau of Markets, Room 507, Fruit Trade Building, 204 Franklin Street, New York City.
North Carolina: Bureau of Markets, Box 729, Raleigh, N. C.
North Dakota: Office of Federal Grain Supervision, 326 Flour Exchange, Minneapolis, Minn.
Ohio:
Office of Federal Grain Supervision, 210 Johnston Building, Cincinnati, Ohio.
Bureau of Markets, Room 307, Johnston Building, Fifth Street between Walnut and Vine, Cincinnati, Ohio.
Office of Federal Grain Supervision, 709 Illuminating Building, Cleveland, Ohio.
Bureau of Markets, 8–9 Exchange Building, 2403 East Ninth Street, Cleveland, Ohio.
Bureau of Markets, 207 Chamber of Commerce, Cleveland, Ohio.
Bureau of Markets, 307 Martlin Building, 71 East State Street, Columbus, Ohio.
Office of Federal Grain Supervision, 2009 Second National Bank Building, Toledo, Ohio.
Oklahoma: Office of Federal Grain Supervision, 502 Patterson Building, Oklahoma City, Okla.
Oregon:
Field Agent in Marketing, Oregon Agricultural College, Corvallis, Oreg.
Office of Federal Grain Supervision, 310 Worcester Building, Portland, Oreg.
Bureau of Markets, P. O. Box 36, North Portland, Oreg.
Pennsylvania:
Bureau of Markets, 530 Woolworth Building, Lancaster, Pa.
Office of Federal Grain Supervision, 578 Bourse Building, Philadelphia, Pa.
Bureau of Markets, Room 315, Insurance Exchange Building, Third, Walnut, and Dock Streets, Philadelphia, Pa.
Office of Federal Grain Supervision, 613–615 Wabash Building, Pittsburgh, Pa.
Bureau of Markets, Room 303, Kellerman Building, Eighteenth Street and Pennsylvania Avenue, Pittsburgh, Pa.
Rhode Island: Bureau of Markets, 416 Federal Building, Providence, R. I.
South Carolina: Field Agent in Marketing, Clemson Agricultural College, Clemson College, S. C.
South Dakota: Office of Federal Grain Supervision, 326 Flour Exchange, Minneapolis, Minn.
Tennessee:
Field Agent in Marketing, College of Agriculture, Knoxville, Tenn.
Office of Federal Grain Supervision, 403 Exchange Building, Memphis, Tenn.
Bureau of Markets, 804 Exchange Building, Memphis, Tenn.
Office of Federal Grain Supervision, 807 Independent Life Building, Nashville, Tenn.
Texas:
Office of Federal Grain Supervision, 511 First National Bank Building, Fort Worth, Tex.
Bureau of Markets, 215A Live Stock Exchange, Fort Worth, Tex.
Bureau of Markets, 501 Moore Building, Tenth and Maine Streets, Fort Worth, Tex.
Office of Federal Grain Supervision, 222 Security Building, Galveston, Tex.
Utah:
Field Agent in Marketing, Agricultural College of Utah, Logan, Utah.
Office of Federal Grain Supervision, 423 Ness Building, Salt Lake City, Utah.

Vermont: Field Agent in Marketing, care of Commissioner of Agriculture, St. Albans, Vt.
Virginia:
Field Agent in Marketing, Old Davis Building, Thirteenth and Franklin Streets, Richmond, Va.
Bureau of Markets, 1008–1009 Times-Dispatch Building, Richmond, Va.
Washington:
Field Agent in Marketing, State College of Washington, Pullman, Wash.
Office of Federal Grain Supervision, 802 Arctic Building, Seattle, Wash.
Office of Federal Grain Supervision, 516 Chamber of Commerce, Spokane, Wash.
Bureau of Markets, Room 424, Post Office Building, Spokane, Wash.
West Virginia: Bureau of Markets, Washington, D. C.
Wisconsin: Office of Federal Grain Supervision, Room 513, 122 Wisconsin Street, Milwaukee, Wis.
Wyoming: Bureau of Markets, Room 26, Customhouse, Denver, Ohio.

The CHAIRMAN. Is there anything else on that? If not, take up the next item. "Conservation of food products in transportation and storage."

Mr. BRAND. The next item in the bill relates to "Conservation of food products in transportation and storage." In this work we are trying to bring about such changes as will result in better refrigerator car equipment, better heater cars, better adapted types of storage, better loading in cars, and better grading. The work with the railroads, which we discussed a while ago, also is conducted under this project. We have a number of men who are constantly taking up in behalf of producers and shippers, with carriers and with the Railroad Administration, the matter of securing relief where relief is badly needed, in the movement of food, food materials, fertilizers, agricultural machinery, and everything which enters into agricultural production.

Mr. ANDERSON. I suppose it is useless to ask if a similar work is not being done by the Bureau of Chemistry.

Mr. BRAND. No; there is no similar work to this being done. The Bureau of Chemistry is doing work with certain products of a similar character. For instance, Miss Pennington is doing with respect to poultry and eggs what we are doing with other products, and she also does work with fish along those same lines. We do not duplicate in those lines. Her work is confined to those particular products.

Mr. HAUGEN. The Bureau of Chemistry does get figures relating to cars and shipment and that sort of thing?

Mr. BRAND. Only incidentally with relation to its poultry, eggs, and fish work.

Mr. HAUGEN. I understood you to say you were doing the same thing.

Mr. BRAND. No; not with reference to those products. The most striking thing we have accomplished in this particular work is that we have made an arrangement with the United States Railroad Administration under which all refrigerator cars constructed will be built in accordance with our recommendations. This, we believe, will bring our refrigerator-car equipment up to a standard that has never been thought of before in this country. That standard has been agreed upon, and all construction in the future will be in accordance with it.

Hundreds of thousands of dollars' worth of provisions are lost every winter because our heater-car equipment is insufficient, and

we are working out the same ideas with reference to the heater car that we have already worked out with reference to the refrigerator car.

Mr. LESHER. Is anybody studying the system of transportation of horses?

Mr. BRAND. Only so far as the Bureau of Animal Industry may deal with it, under the 28-hour law.

Mr. LESHER. That is going to be very important.

Mr. BRAND. Yes. We are not doing anything in regard to horses, except that we do report the horse and mule movement to market.

The next heading in the bill is "Market inspection of perishable foods." This committee is familiar with this item, as having been incorporated in large part in the regular appropriation bill.

There are a number of markets at which inspectors should now be stationed, which will be served if this appropriation is granted. These markets can not be taken care of with available appropriations.

In addition, we are planning to undertake some work in the inspection of butter, and we have also been urged very, very strenuously to do the same with eggs. We have not developed a method of handling the egg proposition, but we have developed a method with reference to butter, and we will take up immediately the inspection of that commodity in this country.

Mr. ANDERSON. When do you expect to do that? I am very much interested in that.

Mr. BRAND. We are expecting to make a beginning immediately in the State of Minnesota. The Minnesota people have promised cooperation in the matter, and we expect to begin within 30 days, on Minnesota butter first, to work out our method of dealing with it.

Mr. WASON. Briefly, what is your line of inspection to be?

Mr. BRAND. At the present time we are inspecting only two or three vegetables.

Mr. WASON. No: I mean on butter?

Mr. BRAND. Well, we will inspect it to determine its score and pass upon its condition and marketability.

Mr. WASON. Do you mean as to whether it has got any substance in it that never came from the milk pail?

Mr. BRAND. No; the Bureau of Chemistry will pass upon that. We will have nothing to do with that part of the matter except that we will report the facts to the Bureau of Chemistry if we are suspicious.

(The following letters indicate the opinion which the various interests affected have of the Inspection Service:)

GRAND JUNCTION, COLO., *March 29, 1918.*

Mr. B. B. PRATT,
Supervising Inspector, 139 North Clarke Street, Chicago, Ill.

DEAR Mr. PRATT: This will acknowledge receipt of your letter of March 26 inclosing certificate No. 536, inspection report on LV 35801, car of bulk apples.

We wish to extend to you the thanks of the members of this association for the manner in which you have handled the inspection of several of our cars in your district. Your reports have been a great help to us in showing the growers the exact condition of these different cars of fruit on arrival at the different markets, for, as you know, an inspection from the Government is always considered fair, and there is no opportunity given the growers to claim that they have gotten the worst of the deal.

Our Chicago representative, Mr. T. S. Clarke, of the Stewart Fruit Co., has called our attention to the very prompt and courteous treatment you have given him in making prompt inspection on our shipments.

Again thanking you, we are

Yours, very truly,

THE GRAND JUNCTION FRUIT GROWERS' ASSOCIATION,
By J. M. SILCOX.

YAKIMA VALLEY TRAFFIC & CREDIT ASSOCIATION,
YAKIMA, WASH., *January 23, 1918*,

Mr. CHARLES J. BRAND,
U. S. Department of Agriculture, Bureau of Markets,
Washington, D. C.

DEAR SIR: Please give me a list of the names and addresses of all of the inspectors that are now assigned to the different markets under your supervision.

We find your work of great benefit in the delivery and adjustment of perishable shipments which are in trouble, and we are anxious to be advised, not only of the names and addresses of the inspectors that are at present employed, but also those who may be employed from time to time.

Yours, truly,

YAKIMA VALLEY TRAFFIC & CREDIT ASSOCIATION,
L. F. SAINSBURY, *Manager*.

DECEMBER 7, 1917.

Mr. E. L. MARKELL,
Supervising Inspector, Bureau of Markets,
204 Franklin Street, New York City.

DEAR SIR: We thank you for your letter of December 3 inclosing inspection certificates on cars PFE 5443 and GN 50005.

These are very valuable and helpful reports, and we are particularly pleased that they are not, as we anticipated, confined merely to a report of condition, but also of pack, color, quality, and grade.

From some source we had obtained the impression that these certificates would contemplate only condition, and we were greatly disappointed, as thereby their usefulness and influence would have greatly been curtailed. As it is, they appear to us as being comprehensive and invaluable, and we can not refrain from this enthusiastic expression of our belief that the installation of this service by the Bureau of Markets is the biggest single thing that has ever been done for the reform and improvement of the fruit trade and the stabilization of the industry of the production and distribution of perishable food products.

It is our earnest hope that the Bureau of Markets will extend this service as rapidly as possible, and it is our intention to cooperate in every possible way with the Bureau and to take full advantage of this splendid facility. We desire, as far as possible, always to have these reports in duplicate, but we note that you have delivered the duplicate of the original reports to our representatives at New York, to whom we are applying therefor.

Yours, very truly,

NORTHWESTERN FRUIT EXCHANGE.

(Copy to Mr. Chas. J. Brand, Chief, Office of Markets, Washington, D. C.)

NEW ORLEANS, *January 29, 1918*.

Mr. CHAS. J. BRAND.
Chief of Bureau of Markets,
U. S. Department of Agriculture,
Washington, D. C.

DEAR MR. BRAND: Your notification that you would have an inspector in this market by February 10, is among the most welcome and important received this year. We believe that the wisdom of your decision will be borne out from the very first day, and that immense benefit will result for the cause of food conservation and in other ways. We will consider it a privilege to cooperate in every way in making the new departure a success.

With best wishes, I am

Yours, very truly,

JNO. M. PARKER,
Food Administrator for Louisiana.

MILWAUKEE, *January 17, 1918.*

MR. B. B. PRATT,
Supervising Inspector, Chicago, Ill.

DEAR SIR: Yours of January 14 received, informing us that you have secured Federal inspection of shipments of fruits and vegetables in a number of important markets, but this does not include inspectors in our market, and we are writing you for further information how to handle this matter. We have had a great many rejections of cars and especially when prices were tending to lower values. Will you have an inspector in Milwaukee in the near future or will it have to be handled from Chicago? Kindly give us all information possible. This is certainly a step in the right direction and this will educate our trade so that they will have to take their cars when they come up to grade and quality, regardless market conditions.

Yours, very truly,

J. H. WUSSOW & CO.,
Commission Merchants.

(At 4.20 o'clock p. m. the committee adjourned until to-morrow, Friday, Apr. 26, 1918, at 10.30 o'clock a. m.)

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Friday, April 26, 1918.

(The discussion of the estimates of the Bureau of Markets was resumed at 11.58 a. m., following the statement of Assistant Secretary Ousley).

BUREAU OF MARKETS.

STATEMENT OF MR. CHARLES J. BRAND, CHIEF OF THE BUREAU OF MARKETS, UNITED STATES DEPARTMENT OF AGRICULTURE—Continued.

Mr. CANDLER (acting chairman). Mr. Brand, will you now take up the rest of your statement? The next item is "City market service," on page 45.

Mr. BRAND. This work is being developed in a number of cities, which are given in the Book of Estimates, Providence, Albany, Boston, Cleveland, Denver, Grand Rapids, St. Paul, and Springfield, Mass. It is being called for very insistently by many other cities, and we are hoping with the funds to be made available that we can extend it to a number of additional places, including Buffalo, Cincinnati, Rochester, St. Louis, Detroit, and certain New England towns where there are large populations, and where market gardening operations surrounding the town have been developed. This work touches most intimately both the producer and the consumer. We reach every morning thousands of market gardeners, and many thousands of consumers. We have had the hearty cooperation of the newspapers in the cities where we have been working. In fact, we have made that one of the conditions of working in those cities, as the work depends for its success upon calling the consumers' attention to those products that are present in excess quantities at any one time. It is a problem of using the excess in order that the producer may sell it to the greatest possible advantage and thus be encouraged to produce more.

Mr. McLaughlin. It adds to the surplus.

Mr. Brand. Yes. We are cooperating very closely with the Food Administration in this work, and I brought along as an illustration for the committee the type of report we get out. [Illustrating.] We jointly get out a report in which we furnish all the wholesale prices and also the prices which, based upon the wholesale prices, the consumer should pay. The Food Administration furnishes the column "Fair retail prices to the consumer," as they do to a certain extent here in Washington. This report is published in the Providence Journal, and they give us every day a double column of space in order to furnish this information.

Mr. Candler. In the papers in my country and in the Washington papers they print a list of necessary items with the price every few days. Is that part of this policy?

Mr. Brand. We cooperate very generally with them on that work. In some of the cities we have joint committees, the Food Administration has a representative, and the Bureau of Markets has a representative, the home economics organization has a representative, and the local organization has a representative.

Mr. Candler. That is to advise the people what the things are worth on the market?

Mr. Brand. Yes.

Mr. McLaughlin. Do the newspapers make a charge for carrying this?

Mr. Brand. In no case. It is all done voluntarily, and in some sections they have taken a very great interest in it. We have not been able to get the same interest in all sections, but the interest is growing greatly.

Mr. Candler. There is a decrease of $20,069.

Mr. Brand. There is a decrease. As I stated yesterday, we made very careful estimates. When we are asking people to put up money to the extent we are asking them now, it is quite important to be economical in the use of it, and we estimated very, very carefully: and for that reason I sincerely hope that the committee will allow the amount estimated. I hope they will feel that there is not much opportunity to cut. Otherwise we would not be able to carry on the work which we have been carrying on.

Mr. Candler. In the general estimates the estimates last year were $2,522,000. The estimate presented in this book of estimates is $2,368,958, showing a decrease of about $152,042.

Mr. Brand. We estimated very carefully, and so I feel free to say to the committee that I hope you will bear that fact in mind in considering my statement before the committee.

Mr. Candler. It means these are the estimates that you consider absolutely necessary to carry on the work?

Mr. Brand. I do. These reports are put out every morning. Our men are at the market place sometimes at 4 o'clock in the morning. In Cleveland we have to get there at 4. The market is opened at 5 in order to facilitate this work: the city is cooperating in it. The loads of every farmer have been tabulated, and the report is ready to be placed on the bulletin board at the opening of the market, giving a statement of the products that are there. The report is mailed to the farmers, sent direct to them at their rural boxes, so that they know what prices are prevailing.

For the information of the committee I would like to insert a number of these reports that are being issued, by title. I wish to do that in order that you may have an idea of the character of the reports that are being issued.

Mr. CANDLER. Let that be done.

PERIODICAL REPORTS ISSUED BY THE BUREAU OF MARKETS, UNITED STATES DEPARTMENT OF AGRICULTURE.

Any series of these reports will be sent free of charge to all persons who show a need for them, upon receipt of request. Telegraphic reports will be sent collect.

COLD-STORAGE HOLDINGS.

Monthly reports showing cold-storage holdings of the following perishable commodities in the United States are being issued:

Box apples.
Barrel apples.
Case eggs.
Frozen eggs.
American cheese.
Creamery butter.
Packing-stock butter.
Frozen beef.
Cured beef.
Frozen pork.
Dry salt pork.
Sweet pickled pork.
Lard.
Lamb and mutton.
Broilers.
Roasters.
Fowls.
Turkeys.
Miscellaneous poultry.
Frozen fish (25 classes).

DAIRY PRODUCTS.

Daily butter-market bulletin.—These bulletins contain daily summaries of market conditions, receipts, shipments, supplies and prices, and cold-storage movement of butter in New York City, Boston, Philadelphia, Chicago, and Minneapolis. They are issued from offices in these cities and from Washington.

Weekly cheese-market bulletin.—These bulletins contain daily and weekly summaries of market conditions, receipts, shipments, supplies, and cold-storage movement of cheese in the above cities.

Monthly dairy market review and production reports.—These reports show the quantity of butter, cheese, condensed milk, and other dairy products, as well as oleomargarine, manufactured in each State, and the production for the corresponding month of the previous year.

EGGS.

Daily egg-market bulletin.—These bulletins give daily reports of market conditions, receipts, shipments, supplies and prices, and cold-storage movement of eggs in New York City, Boston, Philadelphia, Chicago, and Minneapolis. They are issued from branch offices in these cities and from Washington.

FRUITS AND VEGETABLES.

Daily market reports of perishable fruits and vegetables.—These reports are issued from permanent market stations located in 25 of the larger cities of the East, South, and Middle West and from numerous temporary field stations in various producing areas during crop movement. They contain:

(1) Telegraphic reports from all principal markets giving the number of cars of each commodity unloaded daily, the origin of these commodities, prevailing jobbing prices, quality and condition of receipts, and marketing and weather conditions.

(2) Telegraphic reports from all railroads handling the crops in question, giving shipments from each State or district up to midnight of the night before.

(3) Numerous f. o. b. prices from the bureau's representatives in producing territory.

Weekly car-lot summaries.—These reports give the total number of cars shipped from each State by days and weeks, as reported telegraphically daily to this bureau by the transportation companies.

Semiweekly summary of car-lot shipments.—A semiweekly summary is issued of the car-lot shipments of 61 commodities not covered in the weekly summary, or of those upon which reports have been discontinued for the remainder of the

season. These reports are based upon information sent in by the railroads by mail.

Weekly market review.—This review summarizes the trend of shipments and market prices for perishable fruits and vegetables as given in the daily telegraphic reports.

GRAIN AND FLOUR HOLDINGS.

Monthly food survey reports are issued giving total holdings as reported by flour mills, grain elevators, and wholesale grain dealers in the United States, with reference to stocks of wheat and other cereals, of wheat flour, and of various products used as substitutes for wheat flour, including corn meal and corn flour, rye meal and rye flour, barley meal and barley flour, and buckwheat flour. Other monthly food survey reports are in preparation.

GRAIN AND HAY.

Biweekly grain and hay market reports.—These reports are issued every two weeks for the following divisions:

North Atlantic division, which includes Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, and New Jersey.

Middle Atlantic division, which includes Delaware, Maryland, Virginia, West Virginia, North Carolina, and South Carolina.

Southeastern division, which includes Tennessee, Georgia, Florida, Alabama, Mississippi, and Louisiana.

North central division, which includes northern Michigan, Minnesota, Wisconsin, North Dakota, and South Dakota.

West central division, which includes Nebraska, Iowa, Missouri, and Kansas.

Southwestern division, which includes Arkansas, Oklahoma, Texas, and New Mexico.

They show estimates of stocks in dealers' hands, prevailing prices and demand for wheat, corn, oats, and hay in the three last divisions, while in the first three divisions milled feeds have been substituted for hay. Similar reports will be issued in the near future for the east central and northern Pacific divisions, and later for the Rocky Mountain and southern Pacific divisions.

HONEY.

Semimonthly market reports on honey.—These reports are issued during the heavy shipping season and show the arrivals of honey on the market at Chicago, Cincinnati, Denver, Kansas City, Minneapolis, New York City, Philadelphia, and St. Louis, as reported by the railroads during the previous two weeks, as well as the range of jobbing prices for the different varieties and grades for the same period.

LIVE STOCK AND MEATS.

Daily market reports on meat-trade conditions.—These reports show prices, supply, demand, and trend of the market for fresh beef, veal, pork, lamb, and mutton in Boston, Los Angeles, New York City, Philadelphia, and Washington. They are issued early each morning from local offices of the bureau at those points and at Chicago, Denver, East St. Louis, Fort Worth, Kansas City, Lancaster (Pa.), Omaha, Portland (Oreg.), Rocky Ford (Colo.), Salt Lake City, and St. Paul.

Daily reports on live stock loadings.—These reports show the number of cars of each kind of live stock loaded the day previous in the United States, classified by destinations, also tabulated by State origins for a number of the larger market centers. The loading reports are issued early each morning from the offices which issue reports on meat trade conditions.

Weekly summary of meat trade conditions.—Bulletins are issued on each Saturday morning giving a review of market supplies, demands, and prices of fresh beef, veal, pork, lamb, and mutton at Boston, Los Angeles, New York City, Philadelphia, and Washington. They are distributed from the above-named local offices.

Weekly live stock and meat trade news.—This bulletin is prepared in Washington and released every Thursday morning at all of the local offices. Prompt distribution of timely information pertaining specifically to potential supplies and market movements of live stock and meats, marketing methods, new restrictions and regulations affecting the marketing of live stock and meats, and other information of current interest and benefit to stockmen and others engaged in the live stock and meat trade is the purpose of this bulletin.

Monthly reports on live stock at stockyards.—These reports are issued shortly after the 1st of each month and are transmitted to the local offices by leased wire and released simultaneously from all offices. They include the following information: Receipts of live stock during the preceding month and the cumulative receipts for the year to date of cattle, hogs, sheep, and horses and mules at some 60 stockyards, representing more than 50 cities; reports on total shipments showing the number of cattle, hogs, sheep, and horses and mules shipped during the preceding month and the year to date from public stockyards, representing more than 50 cities; reports on shipments of stockers and feeders showing the number of cattle, hogs, and sheep shipped during the preceding month and the year to date from some 35 market centers for feeding and grazing purposes; reports on local slaughter showing the total slaughter for the month and year to date of cattle, hogs, and sheep at more than 50 market centers.

SEEDS.

Seed Reporter.—This bulletin is issued each month and at such other times as may seem desirable. It gives information regarding receipts, shipments, prices, qualities, supply of and demand for seeds obtained through the Seed Reporting Service. It reports the official activities of the department seed-stocks committee, and contains seed information from other branches of the department.

WOOL.

Quarterly wool-stock reports.—These reports show the available supply of wool held by wool dealers and textile-wool manufacturers in the United States on March 31, June 30, September 30, and December 31. The stock is reported in pounds of grease, scoured and pulled wool, tops and noils, in all of the generally accepted commercial grades, combing and clothing, in both domestic and foreign. The report shows also the stocks held by manufacturers in the leading textile-manufacturing States and the amounts held by dealers in the principal wool markets of the country. This report shows the totals in pounds of grease, scoured and pulled wool, also tops and noils.

Monthly wool-consumption reports.—These reports show the amount of wool in the United States which entered into the process of manufacture during the month, in pounds of grease, scoured and pulled wool, in all the various commercial grades, combing and clothing, in both domestic and foreign. It shows also the amount of wool consumed in the principal textile-manufacturing States, in pounds of grease, scoured and pulled wool.

LOCAL MARKET REPORTING SERVICE.

Marketing guide for local consumers.—These reports are issued through the local press each day or several times each week in cooperation with local agencies in Albany (N. Y.), Boston, Cleveland, Denver, Grand Rapids, Providence, St. Paul, and Springfield (Mass.). (It is planned to extend the service to other cities soon.) They show wholesale prices paid by retailers in terms of consumers' units for fruits and vegetables, dairy, poultry, and meat products, and certain dry groceries, such as flour, dry beans, rice, etc. They give also brief comments on the scarcity or abundance of local market supplies, and in some cities the range of retail prices.

Marketing guide for local producers and dealers.—These reports are issued to producers and dealers each day or several days a week in cooperation with local agencies in the above-mentioned cities. They show arrivals and wholesale prices paid by retailers for locally grown produce sold through farmers' markets and in some cases of shipped-in produce handled by commission houses and wholesalers.

Mr. CANDLER. If there is nothing further, you can take up the next item.

Mr. HAUGEN. Are you doing any of this in Washington?

Mr. BRAND. We are doing less in Washington than in many other cities. We are working with the superintendent of weights, measures, and markets, but we are not doing in Washington so much of this specific line of work.

Mr. HAUGEN. Are you giving any advice to the wholesale and retail fellows?

Mr. BRAND. Yes.

Mr. HAUGEN. How is that information disseminated?

Mr. BRAND. By the newspapers and through the regular mimeographed reports. The Star every night carries our live-stock information, matter relating to meats particularly.

Mr. HAUGEN. How about fruits and vegetables?

Mr. BRAND. We do not do that directly. We furnish it to many men around Washington.

Mr. HAUGEN. You get out a report like this for Washington?

Mr. BRAND. Not identical with it; no. In other words, we do not have a cooperative arrangement in Washington such as we have in Providence and Grand Rapids.

Mr. HAUGEN. Have you not been able to make such an arrangement?

Mr. BRAND. We have had so much to do that our men in Washington have been forced to do other work. We have made assignments to this work at various times, but the pressure of other work usually results in our being compelled to do other and more important things.

Mr. HAUGEN. The fixing of prices is made possible through the Food Administration?

Mr. BRAND. Those are not fixed prices in any case. They are merely prices we arrive at after a study of the information, and they indicate what we believe to be fair.

Mr. HAUGEN. These are rather suggestions?

Mr. BRAND. They are what we consider fair prices.

Mr. HAUGEN. Are they generally adhered to?

Mr. BRAND. To a considerable extent. I think it has a very useful effect, especially with certain products.

Mr. HAUGEN. You spoke about the price paid by retailers. That means the price paid to these middlemen? This is not the price the consumer pays?

Mr. BRAND. The last column is the consumer's price.

Mr. HAUGEN. But the first one is actually paid by retailers. Should you not also give the price paid by the price fixers, the men who sit down in a hotel and fix up the prices for the retailer? Is it possible to get that?

Mr. BRAND. I do not suppose that is possible.

Mr. HAUGEN. That could be done by inquiring from the farmers as to what they get for the shipments.

Mr. BRAND. The wholesale prices are the prices the producer gets for his materials.

Mr. HAUGEN. Here [indicating]?

Mr. BRAND. Yes. The wholesale prices are the prices the producer gets.

Mr. HAUGEN. I take it this is the price the retailer pays after the manipulator gets in passing between the producer and the retailer.

Mr. BRAND. We get the wholesale price paid to the country shipper or grower by the wholesaler.

Mr. HAUGEN. But this statement does not give that.

Mr. BRAND. I think the first column covers that.

Mr. HAUGEN. This is the price the retailer pays [indicating]. The retailer buys from the middleman.

Mr. BRAND. Then, the next line of information we get is what the wholesaler exacts from the retailer. Then, the third is the price

that the retailer exacts from the consumer. Those are the three types of prices we are trying to cover.

Mr. HAUGEN. You have the wholesaler and the middleman, but you have not got the prices that the shipper gets.

Mr. BRAND. The three columns, I think, cover that. [After examination of paper.] This particular report does not give it that way. The different newspapers run it different ways.

Mr. HAUGEN. In any of your reports do you give that price?

Mr. BRAND. Yes; we do. That is the strength of the market news work, that it furnishes the information to the producer.

Mr. HAUGEN. That is the thing that is of real value to the consumer, but that has been left out of this report.

Mr. BRAND. That may be left out of that particular one, but that is furnished to many thousands every day. We furnish those prices for each of the cities that are large car-lot shipping centers.

Mr. HAUGEN. What I am interested in is to give the information as to what the producer gets. I will give an illustration. Some time ago I asked a merchant in this city, "What are you getting for eggs?" He said he got 55 cents. I asked him how much he paid for them and he said 48 cents. I said, "You can get eggs from Iowa for 35 cents." He said, "I am not permitted to do it." Now, somebody gets the difference, and that is the fellow that sits in the hotel or his office and fixes the price for the shipper and the retail merchant for the day. That is the fellow I am after. I do not think that is right—and if this is to be of any value whatever it should get after that fellow.

Mr. BRAND. In our discussion yesterday we did indicate a number of ways in which the margin between the producer's price and the consumer's price is being reduced.

Mr. HAUGEN. We know what the margin is. It is double all along the line, and until we get the fellow that sits down here and manipulates prices, whose business is only to fix prices and advance prices and to reduce the price to the producer and advance it to the consumer, this work will not be of any use. He is a gentleman we do not have very much use for nowadays, and I think he ought to be looked after.

Mr. BRAND. The sum total of this work unquestionably eliminates the opportunity for unfair, abusive, and uneconomic practices in those respects. For instance, we show for all the commodities we report what the producer or the shipper receives for his product wholesale. In the case of cabbage, say, we will show that the price is $5 for 100-pound crates.

Mr. HAUGEN. Upon investigation you will find that these combinations are so strong that a shipper can not ship to a city unless he is in the combination. He can not get a place to unload his car without their permission, because the combination controls it, and the price sometimes doubles from the price paid to the producer to the price paid by the retailer. I understand that is going on right here in Washington.

Mr. BRAND. We are trying, of course, to help those producers in any way we can.

Mr. HAUGEN. I have been calling your attention to this because I am interested in it. I do not have much sympathy with those fellows, and I would like to see you get after them and jail some of them rather than some of the people that have been jailed.

Mr. BRAND. Wherever we find any abusive practices we take steps to correct them.

Mr. HAUGEN. You do not have to go very far to find them.

Mr. BRAND. We believe we are able to deal with that. If there is a violation of the antitrust law, if it is price fixing, we will report to the Department of Justice. If we find unfair competition, we report to the Federal Trade Commission. Still other things that can not be reached through those agencies are reached through the licensing division of the Food Administration. We work together with all of these agencies.

Mr. HAUGEN. Have you made any investigation as to what I called your attention to?

Mr. BRAND. We have a mass of information on all those points—possibly not in just the form you have in your mind, but I think it bears very intimately upon it, and we are using that information constantly in our work, and we furnish information to the other agencies of the Government, like the Food Administration and the Federal Trade Commission and others who are likely to utilize it in their prosecutions and other actions. For instance, a man refuses to accept a carload of potatoes, and if we believe the rejection to be unjustified we bring it to the attention of the Food Administration, and the man either accepts the car or loses his license.

Mr. HAUGEN. I think two years ago I called your attention to a shipment of hogs. Within a few miles of Washington the hogs sold at 6 cents, and the retailer paid 9 cents.

Mr. BRAND. I was selling hogs a hundred miles from Washington at between 8 and 9 cents, and I can not understand why he sold his hogs for 6 cents.

Mr. HAUGEN. I do not understand it myself, but I did not doubt the gentleman's word.

Mr. BRAND. We have found time and again that where people do not read our information they necessarily do not get the benefit of it. If you show that hogs are selling for 8 cents and a producer sells for 6 cents, I do not know how we can stop him. We are trying more and more to educate the producer as to the way to use this market information, and many are surprised how useful it is to them and how it assists them in their trading.

Mr. HAUGEN. I think it would be of inestimable service to investigate these matters and turn over the information to the Department of Justice, and by so doing I think you could reduce the cost of living considerably. It would be of benefit to both the consumer and the producer. I do not know whether that would be along the line of your activities; probably it would not be.

Mr. BRAND. We are working along that line absolutely, and we sometimes go a little bit further than our specific authority warrants when we think it is in the interest of public policy to do so; but we try to keep within our proper jurisdiction and to call the attention of those who have the jurisdiction when we do not have it.

Mr. HAUGEN. By following up some of these shipments I think you could locate the trouble.

Mr. BRAND. Particularly in the live-stock business I think we have done a very distinct service.

Mr. HAUGEN. The packer fixes the price. That is all there is to it.

Mr. BRAND. The packer is not absolutely impregnable.

Mr. HAUGEN. He has been impregnable so far, and I have not found any department that has made any impression on him.

Mr. BRAND. I think there never was a time when the packer was more subject to control than now.

Mr. HAUGEN. An increase of one from nine and a quarter million of profits to $34,650,000 does not seem to indicate that he is subject to much control. Take Swift's report of the 30th of September. You an get those reports if you want to verify my statements. You will find the profits increased from $9,250,000 in 1913 to $34,650,000 in 1917; that was on a capital stock of $100,000,000. That is over 34½ per cent profit.

Mr. YOUNG of Texas. And probably some water in the capital at that.

Mr. CANDLER. Is not that because of the increased volume of business?

Mr. HAUGEN. We are regulating the profits, and supposed to limit them to 9 or 15 per cent; still they are making 34½ per cent.

Mr. HUTCHINSON. They may make a very little on each transaction; the profit may be very small on each transaction.

Mr. HAUGEN. So many tears are being shed for these packers. The fact that one concern is making over $34,000,000 profits shows they are doing pretty well.

Mr. YOUNG of North Dakota. Did you ever hear of anybody shedding tears for the packers?

Mr. HAUGEN. We do not have to go very far to find those people.

Mr. YOUNG of North Dakota. I would like to ask Mr. Brand if it would not be possible to get the same statements in Washington that you are getting in other cities?

Mr. BRAND. It would be.

Mr. YOUNG of North Dakota. Will you have enough money to give that same service?

Mr. BRAND. We will have enough money beyond a doubt, but we would have to cut out some of the cities that we have planned for. This work originates, generally speaking, not upon our initiative but upon the initiative of the city itself or the market gardeners surrounding the city. They agree to cooperate in the furnishing of so much money if we will come and assist them and put in so much more; and then the city authorities put up additional money, so that we often have three to four cooperative parties. In Washington we have not had the insistent demand for this kind of work that we have had from other places. That is partly due to the congestion in other places. Many cities do not have as good central markets as we do, and naturally this service is requested where the problem is most acute. We have been influenced by the demand in this matter and have not attempted to induct the service into any place.

Mr. HAUGEN. Are there not as many complaints of the high cost of living here as in other cities, and are there not as many abuses here as anywhere? Are there not as many violations of the law? Before sundown you could undoubtedly get evidence to convict in a number of cases right here.

Mr. BRAND. Why do they not do something about it?

Mr. HAUGEN. That is what I am asking you.

Mr. BRAND. We go just as far as we have the legal power to go.

Mr. HAUGEN. What benefit can we get out of this, if you have not the power? These are simply suggestions. You say you have no

law to enforce it. The fellow violating the law goes scot free; you simply send out reports and suggest a certain price; that is all there is to it. They do not have to comply with these suggestions, on the other hand. If you go down the line and find a fellow who violates the law, and give that information to the Department of Justice, and it will have that fellow convicted and put him in jail, you will get results.

Mr. BRAND. You will recall we drafted the licensing section of the food-control bill, and we stated, in submitting it to this committee for its consideration, that that represented one of the most useful ways of reaching that type of abuse.

Mr. HAUGEN. But you did not reach the fellow we aimed to get after. That reached the retailer, not the manipulator.

Mr. BRAND. The retailer is specifically exempted.

Mr. HAUGEN. He is at the mercy of these price manipulators and law violators.

Mr. BRAND. The retailer is exempted. I do not believe he ought to be, but, as a matter of fact, he is exempted.

Mr. MCLAUGHLIN. You say you operate in a city that asks you to come there?

Mr. BRAND. Generally speaking, that is the case.

Mr. MCLAUGHLIN. In the city of Washington where does the authority rest that could ask you to do this work in Washington?

Mr. BRAND. Generally speaking, it should come from the District Commissioners. We do work with the city of Washington on many things. In the planning of their fish market and other things we worked with them, but in this particular matter we have had no request for cooperation from the Commissioners of the District of Columbia or from their representatives, such as the superintendent of weights, measures, and markets.

Mr. YOUNG of North Dakota. Mrs. Young, when she did her marketing last month, told me that she would need over $5 for vegetables that used to cost about $1. She said she wondered how people here in the city getting moderate salaries could get along at all. Other things cost as much in proportion as vegetables, and if you will look through the list of men who are employed in your own bureau and in the Department of Agriculture, and in these other departments of the Government in the city, I think you will see that it offers a very grave problem to live on the salaries they get. This Congress has done everything it could in respect to advancing salaries, and why could not there be something done at the seat of Government to reduce the cost of living?

Mr. BRAND. War-time prices are always on high levels.

Mr. OVERMYER. Why should they be higher in Washington than anywhere else? I was out in Chicago and in Ohio and in other places, and I believe the prices are higher here than they are anywhere else.

Mr. YOUNG of North Dakota. Mr. Nolan showed me a San Francisco newspaper, and the amounts were tremendously lower there than here on their meats and vegetables.

Mr. BRAND. Of course they are in the greatest early vegetable producing State in the country, and they have a peculiar situation with regard to live stock. They have the first opportunity to buy the meat that comes from Salt River Valley and the Sacramento and San Joaquin, and the great ranges of coast and intermountain area.

They also get the benefit of a lower freight rate to their home markets as compared with Chicago, Kansas City, and other great central markets. So they naturally benefit by that.

Mr. HAUGEN. Mr. Young called attention to a 450 per cent increase in the price of vegetables. What is the increase to the producer?

Mr. BRAND. He is getting very much more.

Mr. HAUGEN. Is he getting 450 per cent?

Mr. BRAND. I do not think so.

Mr. HAUGEN. How much, 100 per cent, 50 per cent?

Mr. BRAND. Generally speaking, he is getting about 100 per cent. I will be very glad to furnish the figures for the record showing the relative prices. They are very unsatisfactory for many reasons. You take the matter of cabbage. If the Florida crop happens to be short at a particular time it does not go around, and naturally it is going to bring a high price. A little later some other crop may come in and the price will change. In the case of potatoes the producer is not doing as well as he ought to do considering the cost of production.

Mr. HAUGEN. You stated yesterday that the price of potatoes in Colorado was 50 cents. A gentleman who appeared before the conferees said that the price was 60 cents. I had a letter at the same time quoting the price of potatoes at 60 cents in quantity. I do not recall what the cost of shipping was. I went down to the market and inquired about the price of potatoes. I was told $2 a bushel. That is more than 100 per cent profit. The middleman must get a big slice of it. What I found is common knowledge, and it seems to me that it would be worth looking into.

Mr. BRAND. That is what we are trying to overcome—to bring those two prices together.

Mr. HAUGEN. You have not overcome it, because the fellow increasing the price has been overlooked.

Mr. BRAND. I do not think I am mistaken in saying that if it were not for our activities the difference would be still greater.

Mr. HAUGEN. No; it is worse than it ever was. I am not reflecting upon your service, but I am calling your attention to a fact that is known by everybody, and, as stated by Mr. Young, Mrs. Young has recently made a purchase at an increase of 450 per cent. We all know that the increase has not been paid to the producer. Take, for instance, potatoes are selling for less than half what they were a year ago as far as the producer is concerned, but the consumers are not getting any benefit. No improvements have been made. I think you are on the wrong track; evidently you are after the wrong fellow.

Mr. BRAND. There are certain laws of supply and demand that we can not modify.

Mr. OVERMYER. You might have additional legislation. Take canned goods on the shelves a year ago; they have advanced over a hundred per cent in that time, and yet those same canned goods were on the shelves at that time.

Mr. BRAND. That is true of every other article, including farming lands. It is pretty hard to regulate those things, because they are the result of supply and demand.

Mr. HAUGEN. Tell me how much farm lands have advanced.

Mr. BRAND. When I was a boy land which is now selling for $200 and $300 an acre used to sell for $10 to $25.

Mr. HAUGEN. It is not fair to compare war prices with prices 40 or 50 years ago. Compare present prices with prewar prices and tell me where the price has advanced.

Mr. BRAND. It has gone up very greatly.

Mr. HAUGEN. Where?

Mr. BRAND. In many sections.

Mr. HAUGEN. Not in the war period.

Mr. BRAND. In the war period necessarily the purchase and sale of land is at a standstill, because money is directed into other forms of investment for the time being.

Mr. HAUGEN. I will agree to that, that it is at a standstill; but that does not signify a big increase.

Mr. YOUNG of North Dakota. I do not believe land has gone up at all in North Dakota since the war began, not even since the beginning of the war in Europe, before we entered it.

Mr. HAUGEN. It is at a standstill.

Mr. BRAND. Money is directed to other channels, unquestionably.

Mr. CANDLER. Land has advanced in the last 15 years very rapidly. My brother gave $50 an acre for a piece of land that I sold myself for $2.50.

Mr. BRAND. Shall I go on? The next is "Direct marketing activities." This work is calculated to bring the producer and the consumer together wherever it is practicable to do so, whether by parcel post, express, or, as we are now doing in cooperation with a number of agencies, through the means of motor-truck transportation.

Mr. HAUGEN. What progress are you making with that?

Mr. BRAND. A considerable progress.

Mr. HAUGEN. You spoke of the motor truck. Do you encourage the farmers to buy motor trucks, or what do you do?

Mr. BRAND. To some extent we do that, where they are financially able, but particularly we try to stimulate the establishment of motor-truck routes as a regular method of package-freight hauling. We are taking up the work at the big centers, and we are starting at the points where the road construction is of such a character as to warrant the expectation of success.

Mr. HAUGEN. What progress is made with parcel-post marketing?

Mr. BRAND. It is growing all the time. The parcel post necessarily can not take the place of agencies through which the great mass of farm products are distributed, but there is a distinct place for its development, and we are working in cooperation with the Post Office Department wherever we find a situation which warrants the expectation that parcel-post marketing will be a success. We do not look upon it as a panacea for all the market troubles of the world, but we believe that in the aggregate there is a large quantity of materials that can be distributed in that way.

Mr. HAUGEN. To what extent has it developed? Can you give it in percentages?

Mr. BRAND. I can give you the percentages in certain cities where we have worked. I should say it has increased 600 or 700 per cent.

Mr. MCLAUGHLIN. You say you have made progress in the motor-truck business. Can you tell us of that progress, as to the number of routes which have been established?

Mr. BRAND. I can not tell you offhand, but I am sure from what I have learned from the men who are working immediately in touch with that proposition that it has been a success. I am able to say that we have stimulated the operation of several routes from Baltimore, several from Philadelphia, and several in New Jersey. We are working around the city of Detroit, where the road situation is such as to enable us to operate to advantage. We are taking up the whole matter of costs, methods of development, the best way of handling the freight, and all the fundamental things that make for the success of that type of transportation.

Mr. MCLAUGHLIN. Does your bureau do any more than to advise and suggest?

Mr. BRAND. Yes; we do. We get the automobile manufacturers to lend us the trucks.

Mr. MCLAUGHLIN. You operate some of those routes yourself, or you are concerned in the operation of them?

Mr. BRAND. Yes.

Mr. MCLAUGHLIN. How?

Mr. BRAND. By getting the loan of the trucks and getting persons to operate them.

Mr. MCLAUGHLIN. Do you employ the men?

Mr. BRAND. We do not happen to have any of the trucks—that is, we do not have any men running the trucks—but we do have supervisors following up the costs and things of that sort.

Mr. MCLAUGHLIN. On how many routes are you working?

Mr. BRAND. There are 43 routes in eight different States, regarding which statistics of operating costs and methods, net and gross profits, etc., have been secured by our investigators preliminary to demonstrational work. On three routes studies of business possibilities have progressed to such a stage that demonstration may be taken up immediately.

Mr. MCLAUGHLIN. You speak about having supervisors. What kind of work does a supervisor do?

Mr. BRAND. They determine how much freight is hauled and at what rate; what it costs to haul this freight; what the upkeep is; and they find out about all the essential factors in determining the best methods of computing the cost for any given service which is developed. The congestion of the small-package freight and express business is such that it is essential to develop supplemental lines to make possible the transport of small shipments.

Mr. MCLAUGHLIN. To what extent, if any, are Government funds involved in the property that is actually used, or in paying the salaries of the men engaged in that work?

Mr. BRAND. We buy absolutely none of the vehicles used in this particular type of work. In our experimental work in carrying on the studies of test shipments we buy the products and conduct all kinds of tests.

Mr. MCLAUGHLIN. When you speak of the products you mean the machinery which is used?

Mr. BRAND. No; I am speaking of the commodities we use for experimental tests as distinct from the vehicle. We do not buy any vehicles in any of this work, but we do sometimes buy the products which are moved.

Mr. MCLAUGHLIN. In some cases you do actually buy the product at prices which you could get back for them?

Mr. BRAND. In the parcel-post work.

Mr. MCLAUGHLIN. Are you still doing that?

Mr. BRAND. To some extent.

Mr. MCLAUGHLIN. How many routes are you carrying on in that way?

Mr. BRAND. I am unable to tell you exactly. Necessarily it is a small number.

Mr. MCLAUGHLIN. Can you put into the record a statement as to how many there are, where they are, and how much money is invested?

Mr. BRAND. It would be very small; almost negligible.

Mr. CANDLER. In this item for "Direct marketing activities" the allotment in 1918 was $43,100, and your estimate for 1919 is $85,100, making an increase of $42,000.

Mr. MCLAUGHLIN. Why do you need so much money if you do not buy any property?

Mr. BRAND. We may need to buy commodities in some cases.

Mr. MCLAUGHLIN. If you have worked it out in a city, or in the neighborhood of a city, determined by actual practice and experience what the thing will cost and to what extent it can be operated, the benefit accruing to those who have to do with it, directly or indirectly, have you not gone far enough? Can you not take that information to other cities and other communities, lay the figures before them, and induce them to go into the business? Will they not do it if they have any initiative?

Mr. BRAND. In many cases, yes; but in many, many more, no. In many cases it will be necessary, probably, to rent the trucks and employ people who would conduct the business and carry it through the demonstrational period and get them to take it up for a test.

Mr. MCLAUGHLIN. After you have gone to the trouble and expense of determining that it can be done and just what it will cost, I doubt very much the advisability of the Government buying that property and carrying on the business further to show people what you have already determined at another place just how it can be done.

Mr. BRAND. On the other hand, it is desirable to relieve our railroad situation and to bring about these improvements. We will probably not have to purchase the property, but we will probably have to rent trucks to make the demonstrations.

Mr. HUTCHINSON. Is it not true that in some sections that is being done now? Is it not true that there is now a motor line in New Jersey, and that they are shipping stuff from south Jersey to New York by motor?

Mr. BRAND. On account of the excellent condition of New Jersey roads we have been encouraging them to start that service.

Mr. HUTCHINSON. And they are very successful?

Mr. BRAND. We believe they are very successful and very useful, and we think they ought to be adopted in other sections of the country.

Mr. HUTCHINSON. I think so, too.

Mr. MCLAUGHLIN. If it is necessary to supplement the work of transportation, is it up to the Bureau of Markets to do that?

Mr. BRAND. It seems to be the agency which is best fitted to do it and which is in closest contact with the affected persons.

Mr. McLaughlin. It may be an advantageous thing to do, but I would not think your bureau is the one to do it.

Mr. Brand. We are working with the other agencies concerned as far as possible. In certain States we are working with the highway commissioners. We have interested a number of truck manufacturers in the matter, and they are pushing it in every way they can.

Mr. Young of North Dakota. What would one of the trucks cost which you ordinarily use?

Mr. Brand. I should say that a 5-ton truck, generally speaking, would cost about $5,000. We do not own any of them.

Mr. Young of North Dakota. They will last in proportion somewhat according to the condition of the roads, I suppose?

Mr. Brand. According to the condition of the roads and the character of operation and things of that sort. Some of them have covered over 200,000 miles and are in constant use.

Mr. Hutchinson. Do you not think if you encourage that sort of traffic over the roads that the Government ought to help to keep up the roads while you are wearing them out?

Mr. Brand. On the other hand, the benefit comes right home to the people along the roads. It is going to enable them to get their products to the markets and the mills.

Mr. Candler. The next item is, "Special marketing activities," and the allotment in 1918 is $100,000. You are asking in this bill for $109,440, which is an increase of $9,440.

Mr. Brand. The necessity for conserving food products in every possible way makes it essential to render assistance in the marketing of specific commodities. In rendering such assistance one of the most practical methods of eliminating marketing difficulties is the formulation of grades, for proper grading will do much to facilitate distribution and cut down the loss from decay of food products caused by mixing sound with unsound commodities. It also does much to relieve the strain on the transportation facilities of the country by keeping unmerchantable products from the market. The department has assisted in preparing and publishing grades for potatoes, and work is now being conducted with apples, peanuts, and sweet potatoes. Work is under way also to develop grades for cotton seed. Improved methods of marketing cotton seed not only will eliminate waste and add to the food and feed supply of the Nation, but will assist in relieving the transportation situation by obviating the shipment of enormous quantities of foreign material now annually transported in freight cars.

Specific instances are constantly arising where cooperative methods must be adopted if marketing operations are to be conducted with efficiency and food products conserved, and the department should be in a position to answer calls for assistance from those who can not advantageously market their products individually.

It is necessary also to give greater attention to the subject of foreign marketing. Since the United States is called upon not only to share its surplus but also its necessaries with the allied and neutral countries of Europe, it is essential, besides stimulating American production to the utmost, to obtain first-hand information regarding the supply of and demand for food products, as well as other marketing and distribution factors, in foreign countries.

We need to work with special products from time to time. During the past season the marketing of peanuts has been a very considerable

problem. The marketing of potatoes, sweet potatoes, soya beans, cotton seed, and cotton-seed meal also involves problems difficult of solution. Special problems are coming up from time to time in connection with special products.

In the case of matters such as the work that should be done in foreign markets or in establishing additional cooperative organizations, this is an especially favorable time for furthering agricultural cooperation.

Mr. CANDLER. Under this fund, is the department doing anything in the way of issuing bulletins in regard to the domestic trade?

Mr. BRAND. Under this very item we are doing work of that sort. We are getting together in our foreign market section a type of reports similar to those which we have issued to a considerable extent for some time in connection with domestic trade. This work has gone on in a modest way for two years and is in charge of one of our very competent men, who has spent considerable time in the foreign markets.

Mr. CANDLER. You have been doing that for some time previous to this time?

Mr. BRAND. Yes; and we wish to extend it under the fund for general marketing activities.

Mr. CANDLER. You are extending your telegraphic service to agricultural associations?

Mr. BRAND. We are; yes. We are reaching more and more of them constantly.

Mr. HAUGEN. The other day some one made a statement that in Minneapolis there were 125 appeals taken and that there were 17 men employed. How many men do you employ there? The statement was made here the other day that there are 17 men employed and that you were looking for more.

Mr. BRAND. What does that refer to?

Mr. HAUGEN. That is in reference to grain inspection. The statement was made that 125 appeals had been taken to the Federal appeal board.

Mr. BRAND. I will be glad to send you a statement of exactly the number of employees there are there.

Mr. HAUGEN. The statement was that there were 125 appeals taken and 17 people were employed there.

Mr. BRAND. That is wholly incorrect. Some one has misinformed you. I do not know where you got the information.

Mr. HAUGEN. I think that information came from Mr. Jacobson.

Mr. BRAND. I will be glad to send you a statement as to exactly how many grain employees we have there. You must remember that the presence there of the supervisory employees cuts down the number of appeals very greatly, and that their labor is not confined to the determination of appeals.

Mr. HAUGEN. But it would not take 17 men to pass on 125 appeals?

Mr. BRAND. That statement is wholly incorrect as to the number of grain-supervision employees in Minneapolis. I can only remember four at this time, though some new samplers have been appointed from time to time.

Mr. HAUGEN. Will you furnish a statement covering that point?

Mr. BRAND. I will be glad to send that information to you.

A question came up yesterday, Mr. Chairman, with regard to the value of the food surveys, to which I would like to refer briefly.

Last night I took the time to formulate five questions which the food surveys will answer. They are as follows: First, How much food have we got? Second, How fast are we using it? Third, How long will it last? Fourth, Where is it located? Fifth, What substitutes are available?

I wanted to bring that out in concrete, brief form. We think it is absolutely fundamental that we should know about our food supply, and that if the war continues for another year or two it is going to be of far greater importance than it is now.

Mr. OVERMYER. The answers to the first two questions will answer the third?

Mr. BRAND. Yes; the third one is closely connected with the others. The question was raised yesterday whether it is necessary to carry on such comprehensive surveys in the future. We started with the basic idea that it is important to know constantly the available supply of foodstuffs, its location, rate of consumption, and the extent of available substitutes.

The production of the year plus the inventory at its beginning and all imports give us the total stock available for the year; the stock on hand at the end of the year, and the exports subtracted from the total stocks show the amount consumed for all purposes during the year. In this day we apply the inventory basis to the food of the Nation, just as you apply it to the stock in your store or to your money in the bank.

(Thereupon, at 12.48 p. m., the committee adjourned, to meet to-morrow, Saturday, April 27, 1918, at 10.30 o'clock a. m.)

The following statement shows, by projects, the allotment of funds made by the Secretary of Agriculture from the $2,522,000 appropriation provided by the food-production act of August 10, 1917, "for gathering authoritative information in connection with the demand for and the production, supply, distribution, and utilization of food, and otherwise carrying out the purpose of section 2 of this act; extending and enlarging the market-news service; and preventing waste of food in storage, in transit, or held for sale; advise concerning the market movement or distribution of perishable products; for enabling the Secretary of Agriculture to investigate and certify to shippers the condition as to soundness of fruits, vegetables, and other food products when received at such important central markets as the Secretary of Agriculture may from time to time designate and under such rules and regulations as he may prescribe":

Allotment of funds, by projects, under the food-production act of Aug. 10, 1917.

Project.	Allotment.	
	Amount.	Date.
BUREAU OF MARKETS.		
1. News service on fruits and vegetables	$655,300	Aug. 16, 1917
2. News service on live stock and meats	275,200	Do.
3. News service on butter, cheese, eggs, and poultry	220,800	Do.
4. News service on grain, hay, feeds, and seeds	227,700	Do.
5. Food and fertilizer surveys of the United States	600,000	Do.
6. Conservation of food products in transportation and storage	200,700	Do.
7. Market inspection of perishable foods	113,000	Do.
8. City market service	86,200	Do.
9. Direct marketing activities	43,100	Do.
10. Special marketing activities	100,000	Do.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Saturday, April 27, 1918.

The committee met at 10.30 o'clock a. m., Hon. Asbury F. Lever (chairman) presiding.

VI.

FOR MISCELLANEOUS ITEMS, INCLUDING THE SALARIES OF ASSISTANT SECRETARIES APPOINTED UNDER THE ACT APPROVED AUGUST 10, 1917; SPECIAL WORK IN CROP ESTIMATING; AIDING AGENCIES IN THE VARIOUS STATES IN SUPPLYING FARM LABOR; ENLARGING THE INFORMATIONAL WORK OF THE DEPARTMENT OF AGRICULTURE; AND PRINTING AND DISTRIBUTING EMERGENCY LEAFLETS, POSTERS, AND OTHER PUBLICATIONS REQUIRING QUICK ISSUE OR LARGE EDITIONS, $1,080,980, OF WHICH SUM NOT EXCEEDING $15,000 SHALL BE AVAILABLE FOR RENT IN THE DISTRICT OF COLUMBIA.

GENERAL ADMINISTRATION (OFFICE OF THE SECRETARY).

STATEMENT OF MR. R. M. REESE, CHIEF CLERK, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. Mr. Reese, take up the item on page 48, "General administration (office of the Secretary)."

Mr. REESE. The item on page 48 is for the general administration of the office of the Secretary. The increase in the allotment, as set forth in these estimates, is but $1,420. There is not much I can add to the brief statement here in the estimates, that the enlarged activities of the department require an additional force in the Secretary's office and in the offices of the two new Assistant Secretaries, who, of course, have to be provided with certain clerical help.

Mr. LEE. That item is to cover additional help for the Assistant Secretaries, of course?

Mr. REESE. Yes, sir. It covers the office of the Secretary, which is the general administrative bureau of the department, including three Assistant Secretaries, the solicitor, chief clerk, the Division of Accounts, appointment clerk, file room, office of inspection, and others.

Under the increased activities of the department all forms of what I might call communication have very largely increased. There has been an enormous increase in the mail, telephone, and telegraph service, which has required some additional help, provided for under this head.

The CHAIRMAN. Are there any questions, gentlemen? If not, turn to page 50, the item of "Rent."

RENT.

Mr. REESE. As usual, we are needing money to pay rent. The department continues to expand. The necessity for additional space is urgent all the time. I might state with absolute truth that every branch of the department is overcrowded; there are certain branches that, in my judgment, are critically overcrowded, and we have been forced to rent anything that can be secured in the neighborhood of the Department of Agriculture, including old dwelling houses, and even one abandoned saloon. We are still crowded, and certain branches are in very urgent need of additional space.

Mr. CANDLER. How are the prices as to these rents? We had a statement about a year ago, I think, when we looked into it, that the rents paid by the Agricultural Department were lower than those paid by any other department, taking them altogether. Have you been able to keep the prices down or are they profiteering on you?

Mr. REESE. I will come to that in just a moment; but in answer to your question, I will state that our average rent is lower than other branches.

Mr. CANDLER. That was the statement made last year and the year before last.

Mr. REESE. The highest rent we have been forced to pay so far is 86 cents per square foot, which includes certain services like heat and elevator service. It is not an exorbitant rent, as things go now in Washington. The amount we are asking for here, gentlemen, I really think is absolutely essential to carry on our work. In fact, I do not see how we can possibly operate for the next fiscal year without this money.

Mr. WASON. Are you not going to require a portion of this increased space after, say, a couple of years from now?

Mr. REESE. My own personal opinion, Mr. Wason, is that we are going to require all this space for some time to come. Of course, nobody can tell how long the war is going to last; but all that I can say now is that the Department of Agriculture, in my opinion, has got to keep busy for some years to come, even if the war ends this summer.

Mr. WASON. Would it not be advisable, instead of paying these exorbitant rents and scattering your employees all over the city, to put up even temporary structures adjacent to some of your buildings there?

Mr. REESE. I think it would, sir. The Department of Agriculture reservation contains about 40 acres and is nothing like covered with buildings. There is ample space there for a temporary building, if Congress in its wisdom sees fit to give us the money and authority to put it there. It requires not only an appropriation, but special authority, for the reason that the law now prohibits the erection of any building on a Government reservation without specific authority from Congress.

The CHAIRMAN. Of course, this committee would not have jurisdiction over that. It would go to the Committee on Public Buildings and Grounds.

Mr. YOUNG of North Dakota. I do not notice anything here on page 50 where you ask for an increased appropriation for rent.

Mr. REESE. It is not an increased appropriation, but it is the same appropriation that we have this year.

Mr. YOUNG of North Dakota. I thought you were asking for something additional.

Mr. REESE. I am coming to that in a moment. Shall I take that up now, Mr. Chairman?

The CHAIRMAN. Yes.

Mr. REESE. The Department of Agriculture some years ago rented from the Atlantic Building Co. the building on F Street now occupied by the Forest Service. By degrees we occupied nearly the whole building, finally paying a rental of $24,800. The present Secretary of Agriculture thought that rent was too high and directed

that negotiation be undertaken to get it reduced. We did so, and got it reduced to $18,000, which is the rental we have been paying for the last three years. Our lease on that building expires on the 30th of June, 1918, and we have no option of renewal. In December, 1917, I took up with the Atlantic Building Co. the matter of this lease and asked them if the department could depend upon the execution by the Atlantic Building Co. of a new lease beginning July 1, 1918, and running to June 30, 1919, with the option of renewal for four years longer at the rental now paid of $18,000. To that the president of the company replied, under date of December 28, 1917:

At the present time there is an unusual demand for office space for commercial uses, which tenancy is always more desirable than that of the Government. If, however, the Forestry Bureau desires to remain in their present quarters, it will have to be at an annual rental of $34,000.

That is an increase of $16,000, or 89 per cent.

The CHAIRMAN. That is the building in which the Forest Service now resides?

Mr. REESE. Yes, sir.

Mr. ANDERSON. Have you anywhere the power of requisition?

Mr. REESE. We have not, sir.

Mr. HARRISON. We took that up with the War Department, Mr. Anderson, and they prepared a bill giving the President power of requisition. The measure was introduced, but no action has yet been taken on it so far as I know.

Mr. ANDERSON. Of course, there are a number of acts which do carry the power of requisitioning. Whether the legislation is broad enough to cover requisition for your department or not I do not know.

Mr. HARRISON. It is not; it covers only the War and Navy Departments and the Shipping Board.

Mr. CANDLER. Mr. Reese, what agent represented that company?

Mr. REESE. The president of the Atlantic Building Co., with whom we have had all our dealings, is Col. Myron M. Parker.

Mr. CANDLER. He sent me a letter when this rent proposition was up before, and we discussed it to some extent in the House. There was a detailed statement, in which he attempted to justify his proposed advance to $34,000, showing the expense of operating the building, taxes, insurance, and all the expenses in connection with it. I filed that letter somewhere, but I do not know where it is now.

Mr. REESE. I think I have that same statement here.

Mr. HARRISON. The department, of course, does not agree with the statement.

Mr. YOUNG of North Dakota. Can not this entire letter from Col. Parker be put in the record?

Mr. REESE. Yes, sir.

(The letter referred to follows:)

OFFICE OF THE ATLANTIC BUILDING CO.,
1418 F Street NW., Washington, D. C., December 28, 1917.

R. M. REESE, Esq.,
Chief Clerk Department of Agriculture.

DEAR SIR: Referring to your esteemed favor of the 27th instant, inquiring whether or not the Atlantic Building Co. would make a lease from July 1, 1918, to June 30, 1919, with an optional renewal of four years longer at the rent now paid by the Bureau of Forestry ($18,000), would say that at the time this lease was made (three years ago) you were quite familiar with conditions.

The Atlantic Building Co. was confronted with a threat from private parties known to you and them to erect a building for the use of the Bureau of Forestry. This at a time when there was a depression in all business and little or no demand for office space enabled the Government to take advantage of conditions, and the Atlantic Building Co. were told that unless the offer of $18,000 was accepted the bureau would move out.

At that time there seemed to be no alternative and $18,000 a year was accepted. Conditions are now quite different, and even if they were not we would not renew the lease at that price, which, as you will see by the accompanying statement, pays less than one-eighth of 1 per cent, allowing nothing for depreciation.

At the present time there is an unusual demand for office space for commercial uses, which tenancy is always more desirable than that of the Government. If, however, the Forestry Bureau desires to remain in their present quarters, it will have to be at an annual rental of $34,000. Justice to the shareholders prohibits any other action.

Very truly, yours,

THE ATLANTIC BUILDING CO.,
MYRON M. PARKER, *President.*

We might add that we pay $1.33 per square foot for space occupied by us in the Kellogg Building. I might also add that we have applications pending from the Government and others for space in the Atlantic Building, should it be vacated by the Forestry Bureau on the 30th of June.

The CHAIRMAN. What do you propose, Mr. Reese, as a remedy for this situation?

Mr. REESE. There are two possible remedies, Mr. Chairman. One would be legislation giving the department authority to requisition, the other is to pay more money for this building.

The CHAIRMAN. Do you want more money or do you want some power to requisition?

Mr. REESE. We want the power to requisition if we can get it.

The CHAIRMAN. Why can we not carry an item in this bill giving you that power?

Mr. ANDERSON. We can, subject to a point of order.

The CHAIRMAN. We can get a rule on that. I suggest, Mr. Reese, that you ask the solicitor to prepare an item giving you the power of requisition.

Mr. REESE. I will do so.

Mr. WASON. I wanted to ask Mr. Reese if he thought it would be advisable to get authority to take over property other than property that they are now already occupying.

Mr. MCLAUGHLIN. For property they need.

Mr. REESE. It would be desirable; but I do not know where the property is to take just now. That is the only trouble.

Mr. WASON. But you wanted some means of meeting your needs as to properties you are already occupying, where the leases have expired?

Mr. REESE. Yes, sir; that is needed.

I would also like very much for this committee to authorize in the bill the expenditure of some amount in addition to the $15,000 estimated in order to provide against emergencies.

The CHAIRMAN. How much additional would you suggest?

Mr. REESE. I would suggest $16,000. I suggest that it be put in just as an increase in this general item.

Mr. CANDLER. We could just say $31,000 for rent.

The CHAIRMAN. Is there anything further on this item?

Mr. REESE. Does the committee desire to have any further discussion of the suggestion of Mr. Wason and others that the depart-

ment take some steps toward the erection of a temporary building on the grounds of the department?

The CHAIRMAN. I do not think so, Mr. Reese. My own idea about this matter is that this committee does not have any jurisdiction in the matter of appropriations for buildings. If the department has made up its mind that it ought to have an additional office building, the proper committee would be the Committee on Public Buildings and Grounds.

Mr. HARRISON. If it came from this committee, it would undoubtedly be referred to the other.

The CHAIRMAN. They have got the jurisdiction. Is there anything further on the rent matter?

Mr. WASON. Could not this committee go to the Committee on Public Buildings and Grounds and have some influence on them?

The CHAIRMAN. I am inclined to think so.

Mr. WASON. I understand the long, slow, circuitous road; but I was thinking about how it could be speeded up.

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Friday, April 26, 1918.

The committee met at 10.30 o'clock a. m., Hon. Asbury F. Lever (chairman) presiding.

The CHAIRMAN. The Assistant Secretary, Mr. Ousley, desires to get back to the department as quickly as possible, and we are going to ask him to make a statement this morning.

STATEMENT OF MR. CLARENCE OUSLEY, ASSISTANT SECRETARY, UNITED STATES DEPARTMENT OF AGRICULTURE.

PUBLICATION AND INFORMATIONAL WORK.

Mr. RUBEY (acting chairman). The first item to be discussed is "Publication and informational work," on page 49.

Mr. OUSLEY. I wish to speak only about the publication and informational work, the exhibit work, and the farm-labor work. You will find from the statement on page 49 that we had an allotment for publication and informational work in the last act of $234,800, and we are asking for $235,000, which is substantially the same amount. We have unexpended of the $200,000 allotment for publication—that is to say, bulletins and leaflets and posters up to the 1st of April a little less than $22,000, so that we have enough money to finish the fiscal year with, and therefore we assume that we can get along another year with the same amount, though you observe that we operated the current year since the 10th of August, when the act passed, whereas under this bill we will operate from the 1st of July. But my judgment is that the demand for emergency publications will not be any greater next year than they were this year, and that with the funds provided in the other act we will be amply supplied. In fact, Mr. Chairman, on account of the congestion in the Government Printing Office we will perhaps not use all of the required fund. That money in the regular act must be expended through the Government Printing Office. The funds here can be expended

with outside concerns, so that we have been able to publish many of our emergency publications outside and to get quick action.

Mr. RUBEY. It might be well if you would briefly outline the character of the publicity work—the character of the circulars and work of that kind—which you are doing with this particular fund.

Mr. OUSLEY. I may say that the character of the publications under the emergency or food-production act differs from the regular publications only in the respect that the emergency publications are addressed to the particular needs of the moment, and we do not use that fund for any of the regular publications. For instance, we have a large volume of purely educational bulletins, such as Farmers' Bulletins, that have accumulated and been built up in the department for years, and those were all carried under the regular fund, but if we want to carry a wheat drive or a vegetable drive or want to stimulate the production of poultry at a particular time, or if we want to save perishable products, those are the activities that we sustain through the publications from the emergency fund.

Mr. RUBEY. When you determine to make a drive of that character how do you get your publications into the hands of the people?

Mr. OUSLEY. Mainly through our county agents that now are found in nearly every agricultural community in the United States. Then we utilize the councils of defense for carrying the information to other quarters; we use farmers' organizations and newspapers.

Mr. RUBEY. Agricultural journals?

Mr. OUSLEY. Agricultural journals. I am referring especially to the publication of leaflets, posters, and bulletins, aside from the regular publicity work of the department. In the office of information we are carrying on an extensive press service, and it is greatly to be desired that we enlarge that service in order that we may furnish the different newspapers in a town a different statement of the same facts. That makes that much more writing and that much more work. Two morning papers published in Cleveland, for instance, prefer not to carry precisely the same matter. It would be very desirable if we could furnish to each of them a different, or what they call exclusive story, and we have done a great deal of work of that kind and desire to do very much more of it. We can thereby get more publicity because of the pride of the newspapers in having exclusive material. The total number of leaflets, posters, and emergency bulletins printed up to the 25th of April was 26,102,199. For instance, we published a million copies each of the food leaflet in cooperation with the Food Administration. That was a very extensive system of primer lessons on food conservation, and we used them not only in the country but very extensively in the cities through our urban demonstration agents provided for in this act.

Mr. RUBEY. Are there any questions on this informational work?

Mr. MCLAUGHLIN. I was wondering if these publications were of the character of so many other publications that are being issued now, giving promises of what is going to be done rather than a statement of what is being done.

Mr. OUSLEY. I may say that the publications generally are neither promises nor recitals. The publications contain information and advice. The department does not spend much time in announcing what it is going to do, and certainly does not spend any money in boasting of its accomplishments.

Mr. RUBEY. I am glad there is one Government department that issues publications of that kind.

Mr. OUSLEY. Our leaflets contain careful instructions in production and conservation and in cheaper and more healthful living; the posters call attention to crop pests and give instructions about how to eradicate them. The bulletins are of the same nature, addressed to particular topics. I may say that the bulletins of the department are not promiscuously scattered around over the country. We have no method of just handing out these bulletins; we decline to do that. The bulletins are circulated through county agents and home-demonstration agents, and are furnished to people who ask for information.

AGRICULTURAL EXHIBITS.

Mr. RUBEY. The next item is "Agricultural exhibits."

Mr. OUSLEY. We are asking there for an increase of from $7,900 to $18,020, because last year we were unable to supply all the requests for exhibits at fairs and for other public occasions, and this year Prof. Scribner has worked out a much more systematic plan which will utilize all that fund. We require the regularly established fairs to pay the expenses of installing the exhibits, the freight and express, and other incidentals, because for the most part those fairs, while highly educational, bring a return in money to the towns where they are held, and we insist that the beneficiaries should bear the expenses. On the other hand, there are a great many efforts now being made which are absolutely without any hope of profit, such as the patriotic food show fair held in Chicago not long ago; those being purely patriotic and for the public good and without any material return to everybody, we feel that we should pay the expenses for our exhibit. And we would like to do more of that work this year than we have done in the past. There are many small fairs, too, to which we can send small exhibits, affecting the agricultural work in particular regions.

Mr. YOUNG, of Texas. Do you cooperate with other departments in making exhibits in county fairs?

Mr. OUSLEY. No, sir. There is now an interdepartmental committee, of which Prof. Schriber, of the Department of Agriculture, is chairman, and efforts are being made now which give promise of immediate success, to have all Government exhibits assembled together for these greater fairs and to go under a common direction.

Mr. MCLAUGHLIN. What departments does that include?

Mr. OUSLEY. The Army and Navy, and Public Information, and Food Administration, the Interior Department, and the Department of Commerce. The fair managers desire Government exhibits, and an effort is being made now to combine all the exhibits under a common direction, or in correlation if not under common direction.

Mr. MCLAUGHLIN. How will the expense of such exhibits be paid?

Mr. OUSLEY. The fairs will pay freight and the cost of installation, and the department will furnish only the experts necessary to set them up and exhibit them.

Mr. YOUNG, of Texas. Of course, the department furnishes the exhibits?

Mr. OUSLEY. Yes, sir.

Mr. OVERMYER. I may say in that connection that I have had more or less active participation in fairs in Ohio for a number of years, and those exhibits are all of great value. I think there is a great deal of education in them that ought not to be overlooked.

Mr. OUSLEY. We estimated that we reached over two million people, that over two million people saw our exhibits last year.

Mr. YOUNG, of Texas. It brings the information to them in concrete form.

Mr. OUSLEY. They are very helpful. I nearly always go to the State fair in Texas. They have perhaps the greatest State fair in the United States, and the Government exhibit is always swarmed with people.

Mr. RUBEY. Do you attempt to do any demonstrational work in connection with these fairs?

Mr. OUSLEY. Yes, sir. For instance, we had such an exhibit over at the Baltimore, "Over There" show, a very interesting exhibit that occupied the whole of their Armory Building with some patriotic exhibits of various kinds. They had guns from France and trophies captured from the Germans, and we had a food exhibit and an agricultural exhibit and some demonstration work. For the most part the State agriculture college furnishes the demonstrators. The Agriculture College of Maryland, furnished the home economics demonstrators there. The Department of Agriculture always works in cooperation with the State agriculture college. So, in a big exhibit in New York the Cornell people furnished the demonstrators to put on the cooking and drying and canning demonstrations.

Mr. MCLAUGHLIN. Have you found it necessary to send somebody to each one of the exhibits?

Mr. OUSLEY. Yes, sir; it is always to be desired and is always done where the exhibit is of any volume, because you can not depend upon the local people to pack them up properly, or even to display them properly. There is a good deal of art in the display of these exhibits, and our men have had experience in that and can do it more effectively.

Mr. MCLAUGHLIN. Does that take a great many men?

Mr. OUSLEY. No; this scheme of 34 fairs that we have arranged for this next fall can all be taken care of by about two men. They go in a circuit.

Mr. MCLAUGHLIN. That would be for the State fairs?

Mr. OUSLEY. Yes, sir.

Mr. MCLAUGHLIN. But how about the other numerous exhibits?

Mr. OUSLEY. We frequently send out small exhibits without anybody to go with them. Where it is an established institution that gets an income, we make them pay the railroad fare of our people, too. Otherwise that $18,000 would not go very far. I think I am warranted in saying that this exhibit department is about as economically conducted as any enterprise of which I have information. I think we are getting as much for our money as for any work we are doing, because we make the local communities pay the greater part of the expense.

Mr. HARRISON. You recall that it was the practice to appropriate $20,000 for one exhibit for many years. This $18,000 will cover many fairs and exhibits.

Mr. OUSLEY. It is estimated that in this schedule of 34 States, where we hope to make exhibits at the regular fairs, we will reach 12,000,000 people with an impressive exhibit.

Mr. RUBEY. If there are no further questions on that, please take up the next item at the bottom of page 50.

ASSISTANCE IN SUPPLYING FARM LABOR.

Mr. OUSLEY. We had an allotment last year of $97,250, and we are asking for $162,000 for 1919. We have farm-help specialists now, I believe, in every State; there may be one or two vacancies; and we need supervisors for the groups of States, and we need some additional clerical work in the office of farm management, which is the office through which this activity is directed. The farm-labor problem is a serious one, and while we have no desire to assume responsibility, there is a certain responsibility that comes to us inevitably, because our county agents are in touch with the farmers and the farmers naturally look to them for advice and help. We are not encroaching upon the Department of Labor; we are working in close cooperation with them; but the Department of Labor offices are in the cities and our farm-labor demand is in the country. The county agent is, therefore, the best qualified man to give advice on that and to give information about it, and it is necessary for us to have in each State a farm-help specialist to work in cooperation with the county agents and bring their demands to the attention of the Labor Department, or to the attention of any other source of farm labor. The farm-help specialist is also helpful in the fact that he can assemble the county agents in groups in a given region and by conference ascertain that a certain number of farm laborers may be moved from one county to another as the season changes, as in wheat harvesting the harvest shifts from one county to another county, and this farm-help specialist is enabled to aid in that movement of labor.

Mr. MCLAUGHLIN. That is largely temporary work?

Mr. OUSLEY. Yes.

Mr. MCLAUGHLIN. What about supplying permanent help on the farm for a season?

Mr. OUSLEY. We aid in bringing to the attention of available laborers the demands of farmers.

Mr. MCLAUGHLIN. How do you do that?

Mr. OUSLEY. Only by taking the reports of the county agents and communicating them to the labor agencies. We can not compel anybody to go, and we can not create any labor.

Mr. MCLAUGHLIN. The labor agency here in Washington, or most cities.

Mr. OUSLEY. All over the United States. There are labor agencies in every city, and the Department of Labor has its own agencies in most cities.

Mr. WILCOX. Our State man in New York placed 13,000 last year—permanent men. Our man in Ohio just told me he had placed 900 during the month of March; that is permanent men, not temporary men.

Mr. MCLAUGHLIN. What report do you get as to whether or not these men are satisfactory?

Mr. OUSLEY. You mean, whether the men that are being placed now are satisfactory?

Mr. MCLAUGHLIN. Yes; or have been. You have had an experience of several months.

Mr. OUSLEY. Well, I should say that they are about as satisfactory as men for permanent employment would be, taken without personal knowledge in any business. There are just about as many that made good or who failed as in any other field.

Mr. MCLAUGHLIN. How do you receive reports as to whether or not they are satisfactory?

Mr. OUSLEY. We have no minute report on that. We do not attempt to keep minute reports on that; it is too small a detail to give any attention to. All we can do is to furnish men who appear to have good qualifications and are willing to go for the wages. I do not think it would be practicable for us to follow up every man and have a report of every man as to whether he is satisfactory to the farmer.

Mr. MCLAUGHLIN. I thought possibly you had reports from those who had employed the men, some of them anyway, possibly a large number, indicating in a general way that the work had been successful.

Mr. OUSLEY. But I may say in a general way that the large proportion of the laborers who are secured are satisfactory.

Mr. MCLAUGHLIN. How do you learn that?

Mr. OUSLEY. We learn it from the county agents.

Mr. RUBEY. We get reports from the farmers complaining of the men employed that way.

Mr. OUSLEY. That is true, and many have reason to complain. On the other hand, some of the laborers complain that the living conditions are not quite satisfactory. There is undoubtedly room for improvement there.

Mr. RUBEY. The probabilities are that when you do not hear anything they are all right?

Mr. OUSLEY. The man who is satisfied never says a word; it is the man who is dissatisfied who makes a noise.

Mr. RUBEY. Some time ago I had a statement from the department about the work in Kansas. It seems that they had some very thorough work in the way of canvassing.

Mr. OUSLEY. We are carrying on a very extensive campaign now through the county agents, through chambers of commerce, and through councils of defense, to get men of farm experience in the towns and cities to pledge to give a certain number of days. Many of the States report that they have sufficient pledges to care for the harvest. North and South Dakota I think have reported, and Kansas has reported; they report at least progress enough to assure them that they have enough men to do it.

Mr. WILCOX. They report in Kansas that they have gotten 50,000 people of farm experience pledged to give from 2 to 15 days of their time to the harvest, but that they will not be quite sufficient. There is a moving army that comes from the southwest and joins the forces in Kansas to make up the required number.

Mr. RUBEY. We had a bill in the House some time ago that passed the House. One section of it appropriated $2,500,000 for this character of work. I have not much idea as to whether that bill will be passed by the Senate or not; I rather think not, because the principal

feature of it related to furnishing seed, and the season is probably passed for that and the bill not being acted upon by the Senate, because of that section will not be acted upon. What do you think of the proposition to make a larger appropriation to cover the work along the lines of that provision of the bill?

Mr. OUSLEY. If you think that there is a doubt that that bill will pass, I think you ought to provide for it here. We have been expecting that act. Our information was, so far as you can forecast what a legislative body is going to do, that the act would pass. If your guess is correct that it will not pass, by all means I would urge a very large increase in this amount.

Mr. MCLAUGHLIN. That bill contemplates a different kind of work in some respects.

Mr. OUSLEY. It contemplates advancing money for transportation.

Mr. MCLAUGHLIN. For paying railroad fare, and so on. Has the work that you have been carrying on involved any of that?

Mr. OUSLEY. We have frequent requests for such accommodation, but we can not furnish it.

Mr. MCLAUGHLIN. In no case have you furnished it?

Mr. OUSLEY. No; we have no authority to furnish it.

Mr. WILCOX. In one or two of the States the cooperating agency in the States has been allowed a revolving fund which would be used by cooperation between our men and their men.

Mr. OUSLEY. Not Federal funds. That has been done, as Mr. Wilcox states, from some local funds, but not from our funds.

Mr. MCLAUGHLIN. Have you made investigation enough to determine that it is a feasible proposition?

Mr. OUSLEY. It is a feasible proposition; yes, sir; and in many instances would be very helpful. You can always get the local bank or groups of farmers to do it if you have time, but that means days. If the department had a fund that it could advance and take a little risk, there would not be any time lost, and you would have quick action. There would be very little loss in the way of money.

Mr. WILCOX. This fund I am speaking of was operated by the Public Safety Committee of Minnesota. As I remember, it was a $10,000 revolving fund, in constant use, and the last report I had was that only $34 had been lost.

Mr. MCLAUGHLIN. Is this money advanced as railroad fare to be paid back?

Mr. WILCOX. Yes; and it has all been paid back. Only $34 has been lost.

Mr. OUSLEY. It is to be used in the same way that we use the seed fund. We have been buying seeds and selling them to the farmers.

Mr. RUBEY. Your idea would be that whatever appropriation we might make along that line would be used as a revolving fund?

Mr. OUSLEY. Yes, sir.

Mr. RUBEY. That is, to pay the railroad fares in advance, and then let the laborers repay them?

Mr. OUSLEY. Or the farmer, as the case may be.

Mr. MCLAUGHLIN. When the bill was before the House several of the gentlemen from the South feared that negro labor might be induced to leave the sections of the country where they were employed if there was a promise to pay railroad fare. Have you found any difficulty of that kind?

Mr. Ousley. I have not heard of any movement of that kind. I should say, knowing the negro as I do, that if he saw a chance for a free ride he would be likely to go; but if I were administering that fund I would not let him have the money unless there was a farmer at the end of the line.

Mr. Rubey. Is it the policy of your department to take a farm laborer from one community where he is employed to another community?

Mr. Ousley. No. On the contrary, we have secured very readily the consent of the War and Navy Departments to instruct their contractors in getting labor for Army and Navy activities, for construction work, not to advertise or solicit labor in the farm regions immediately around.

Mr. Rubey. And if you were given authority you would not use that fund to bring labor from one point where it was employed in agriculture to another point?

Mr. Ousley. Oh, no. We would only move the labor that had finished its task in one community to another community. It is like the berry pickers that start down in Florida and move up the Middle States, and like the wheat harvesters, where they start in Texas and move up to Kansas and Nebraska.

Mr. McLaughlin. I did not speak facetiously about this matter. Gentlemen were really afraid that laborers in large numbers might be induced to leave the South.

Mr. Ousley. I think Mr. Young will agree with me that if we were to let it be known in Texas that negroes could get a free ride up to Kansas we would have several trains of them every day.

Mr. Young of Texas. That is the nature of the negro.

Mr. Ousley. But the Department of Agriculture would not furnish transportation for that class of laborers.

Mr. Candler. It was not so much the fear that they might be moved, but we were fearful that there would be a conflict betwen the National and State governments, because we have in the States of Alabama and Mississippi local laws prohibiting the offering of inducements or using any influence in any way, or sending people in, in order to offer inducements to carry labor out of the State; we were fearful of that more than anything else. So far as moving men out is concerned, 60,000 men moved out of that section of the country last year. Of course, if they want to go they have a right to go. As you said a moment ago, if you let it be known abroad that the Government was furnishing transportation you could fill a train a mile long every day.

Mr. Ousley. Yes; and some white people might do the same thing. But of course the Department of Agriculture is not going to run any excursions. We would not want to create any disturbances with agricultural labor. The department is interested in the agriculture of the entire United States, and the agriculture of the South is as important as the agriculture of the North.

Mr. McLaughlin. To some extent, at least, there would have to be solicitation; notices would have to be published; the attention of labor in one part of the country would have to be attracted to the fact that their services were needed in another part, and these laws Mr. Chandler speaks of are still in force in the South. Do you think

there would be any possibility or liability of conflicts between the Federal authority and State authority under those circumstances?

Mr. OUSLEY. There would not be any conflict if the Department of Agriculture exercised ordinary sense and tact in administering this work. There would be if it were put in charge of some foolish man who would go and solicit labor, of course.

Mr. MCLAUGHLIN. You spoke of work having to do with the shipping of men from one State to another, not for permanent employment but for temporary employment. Have many of those men been negroes?

Mr. OUSLEY. No; very few; none at all that I know of.

Mr. MCLAUGHLIN. Has there been any fault found with that work as to its affecting the Negro, by the employers of the South?

Mr. OUSLEY. No, sir. There has been no movement of which we have been a part. Consequently they could not have had any complaint.

Mr. WILCOX. If we undertook to pay transportation to men it would naturally be done through consultation with our State man in each State, and if there was a shortage in the State he would be the very first man to howl about anyone going out, and it would depend entirely on his information.

Mr. MCLAUGHLIN. Suppose a man would wish to go?

Mr. WILCOX. But we would refuse to pay his fare.

Mr. OUSLEY. Suppose Kansas reports a desire for a thousand laborers. Mr. Wilcox would ask his farm-help specialist in every State if they had any laborers to spare. They would notify the county agents and they would look into the matter.

Mr. MCLAUGHLIN. Would you not accept the services of a man who wished to change if you knew that he was needed?

Mr. OUSLEY. We would not put the temptation before him.

Mr. RUBEY. And you would not pay the transportation?

Mr. OUSLEY. No. If the movement of a great number of men would upset the agriculture of Kansas in order to supply the agriculture of Texas, we would not furnish the transportation.

Mr. MCLAUGHLIN. I do not see how you could avoid placing that temptation before him, as you expressed it.

Mr. OUSLEY. Suppose New York calls for a thousand laborers to plant potatoes. Mr. Wilcox will ask what the labor conditions are. Maybe three States would report that they could spare the men. We would only use men from near-by States; we would not transport men far away from New York, because the farmers or laborers will have to pay the money back; so we would go to near-by States, and if they reported no surplus labor, we would take no further steps. At the same time we would call upon the labor bureau; we might be able to get the men from their rolls, or from private agencies.

Mr. MCLAUGHLIN. I am glad to have you speak fully of this, because I was impressed in the House with the fact that the condition might be serious. I am sure that the gentleman from the South who spoke, spoke sincerely.

Mr. OUSLEY. I can quite understand their solicitude.

Mr. MCLAUGHLIN. A difficult situation might arise, and, of course, we do not want to embarrass the people in any State; we might

embarrass them to the injury of agriculture, and that sets back the very cause we are trying to advance.

Mr. OUSLEY. If it were rashly administered, it might cause a great deal of mischief, undoubtedly.

Mr. YOUNG of Texas. Have you had any report come from Texas with reference to labor for the gathering of cotton this fall?

Mr. OUSLEY. I have not had any at all yet, Mr. Young. We were saved in Texas last year on account of the drought which released farmers. If the men who left the West do not go back, we are going to have very great difficulty in picking our cotton this year, and we will not do it without mobilizing men from the towns.

Mr. YOUNG of Texas. I was wondering what the situation was with reference to Mexico. In our part of the country we gather a large part of the crop by the help of men that come across the border.

Mr. OUSLEY. The Department of Labor permits that.

Mr. YOUNG of Texas. They come overnight and do the work, and when they have finished they disappear, and we do not know where they came from, and we do not know where they went.

Mr. OUSLEY. We can get them again; we will not get them in such large volume as we did, because they are a little bit afraid of being drafted.

Mr. CANDLER (acting chairman). Have you received any requests from the South?

Mr. OUSLEY. The situation in Georgia and Alabama is the worst. Of course there is complaint everywhere; but there is this to be said about some of the complaints: The farmer has been accustomed when he wanted an extra hand to send into town around the square, where he could pick up some fellow waiting for a job. There are few people waiting for jobs now; there is a shortage in that sense, that men are not waiting, looking for employment.

Mr. CANDLER. I have had a few letters from the first district of Mississippi. I wondered whether or not there was any special demand in southern Mississippi.

Mr. WILCOX. That is in very fine condition, according to our man there. He said there was no shortage in sight that could not be met as fast as the demands were made, except possibly in the Delta. He further said that at the time of the wheat harvest in Kansas he would have a number of white men that could go up there for the wheat harvest.

Mr. CANDLER. Who is the agent?

Mr. WILCOX. E. L. Roberts, of the agricultural college.

Mr. OUSLEY. We are now carrying on a rather extensive campaign, particularly with the negroes, to get them to abandon their Saturday loafing day.

Mr. YOUNG of Texas. You have got a hard job.

Mr. OUSLEY. It is a hard job, but in Alabama the director of extension work has had a good response. A good deal can be accomplished if the sheriffs and other officials will enforce the law against loafing.

Mr. CANDLER. You know, the negro laborer in the South is especially valuable and especially suited for his exact location, and one difficulty with that laborer is that when he goes out other people can not take his place because they do not know how to make those prod-

ucts. It takes a "nigger" and a mule to raise cotton, and other people can not do it.

Mr. OUSLEY. I do not quite agree to that doctrine.

Mr. CANDLER. Under the direction, of course, of a man who knows how to control them.

Mr. OUSLEY. I agree that the negro is particularly fitted for the South; and furthermore the accommodations on the farms are built for negroes, and we can not change those suddenly.

Mr. MCLAUGHLIN. You spoke of the large number of men coming from Mexico. I presume that some of their papers announced that the labor was needed in Texas; or perhaps some of the papers in Texas that circulate over the border carried advertisements?

Mr. OUSLEY. I do not think they read the newspapers. There is a kind of grapevine telegraph across the Rio Grande. Those Mexicans do not read newspapers.

Mr. MCLAUGHLIN. I am glad your publishers do not do that, because it is against the law.

Mr. OUSLEY. No; they are not doing that. There are some Mexicans who are citizens, and they get the word across the border somehow.

Mr. YOUNG of Texas. You make your trade with a peon to clear your land; you pay so much an acre and so much a cord for your wood, and your contract is with him; and overnight there will be a swarm of those Mexicans appear the next day. You do not know where they come from. They finish the work and they disappear, and you do not know where they go to. [Laughter.]

Mr. OUSLEY. It looks uncanny at first, but you get used to it after a while.

Mr. HAUGEN. Can not this work be done by the Department of Labor? The Department of Labor is doing some of this work now.

Mr. OUSLEY. Yes.

Mr. HAUGEN. Could it not be done by the Department of Labor more economically?

Mr. OUSLEY. Now, you are asking a question that I do not care to answer. I do not know whether it could be done more economically by them or by us.

Mr. HAUGEN. Would this not be a duplication of work, because of sending two men into the same locality to do practically the same thing?

Mr. OUSLEY. I do not think so. The Department of Labor and the Department of Agriculture must have contact with farm labor; we can not escape it. Here is a county agent in a given county, and a farmer goes to the agent, and we must render service in such a case.

Mr. HAUGEN. I understand you to say there was a shortage of farm labor everywhere. The result would be robbing one community to help another.

Mr. OUSLEY. No; we would not rob one community to help another.

Mr. HAUGEN. That is exactly what is taking place. For instance, Federal officials have gone into our State and have been taking our miners away. The Federal Government is doing that. My authority for that statement is our governor and the fuel administration of our State.

Mr. OUSLEY. The Department of Agriculture is not doing it.

Mr. HAUGEN. The results would be the same as stated by Mr. McLaughlin. You necessarily would have to advertise. North Dakota might offer seven or eight dollars a day for harvesting and thrashing. As a result, North Dakota might take the labor away from Iowa, and North Dakota would have the help.

Mr. OUSLEY. I think you were not present when I answered Mr. McLaughlin a while ago. Suppose North Dakota should call on us to help get labor for the wheat harvest. The Office of Farm Management, through which this service is conducted, would immediately call upon our man in each State, and say, "Have you a surplus of harvest hands?" Upon the receipt of advice from the different States we would know which States could spare farm labor and which States could not. We would communicate, then, with the States that could spare farm labor. As soon as the harvest was over in Texas or Kansas, we would offer to those farm laborers an opportunity to go to North Dakota. So we would not, in the sense you have in mind, go and solicit labor, to take labor from other employments.

Mr. HAUGEN. But are not all States short of labor?

Mr. OUSLEY. There is no locality that I know of that has any surplus; but there are certain groups of men that engage in wheat harvesting that move from Texas all along up through the wheat States in the Northwest. That is the movement that we would facilitate.

Mr. HAUGEN. In our country we employ them the year round and are paid about $60 a month, I think. When you come along and offer them $5 and $6 a day and transportation the result will be that our corn will rot in the fields and the harvesting will probably be done in North Dakota.

Mr. MCLAUGHLIN. To some extent I do not see how you are going to avoid that.

Mr. OUSLEY. Let me put a hypothetical case to you. Suppose we do not run it, or the Department of Labor does not run it, or that no Government function runs this service. Here are the farmers in North Dakota who want labor. As a matter of fact, they are not going to call for labor, because the town people are going to help them. But suppose they would pay $7 a day. They would go to some private labor agency and get it to go into another State and solicit the labor.

Mr. HAUGEN. They go to an agency in the cities and get the people that are drifting along; they get the I. W. W. and that class of men, and some good men with them. But the complaints are that they do not get the best kind of labor. They get this driftwood that is floating over the country, together with a lot of very excellent men.

Mr. OUSLEY. The point I am making is that if the Department of Agriculture does not render the service, then the private employment agencies are going to render it. I think the Department of Agriculture is less likely to disturb the agricultural labor than the private employment agencies.

Mr. HAUGEN. This idea of farming with driftwood and inexperienced men does not go. They need skilled men on the farm just as much as at the banks or in any profession. A number of people were imported into our section for laboring, and our experience was that they stayed for a week or two. We had some Mexicans, and as a result we had help in planting the sugar beet, but were without help in harvesting. I do not think that should be encouraged. That will be

exactly the result if the Government goes into this business. I believe we are on the wrong track. I think that has been fully demonstrated in Iowa in taking away miners, men coming in there and taking them out in large numbers.

Mr. McLAUGHLIN. When they get up into Michigan they like to stay.

Mr. HAUGEN. After all, you help one community at the expense of another, and in the end you have not gained anything.

Mr. OUSLEY. You say this has been done by private agencies?

Mr. HAUGEN. Oh, no; by the Government.

Mr. OUSLEY. Not by the Department of Agriculture.

Mr. HAUGEN. I suppose it was by the Department of Labor.

Mr. OUSLEY. I do not think the Department of Labor would do that.

Mr. HAUGEN. But the telegrams and communications received from the Governor and the Fuel Administration indicate that labor in the mines has been taken away from Iowa.

Mr. OUSLEY. I did not know that. The only point that I am making is that it is better to trust the Department of Agriculture, or the Department of Labor, to handle these labor problems than to trust private agencies.

Mr. HAUGEN. It might do if there were any surplus labor in any section of the country. My understanding is that there is no surplus, hence in order to accommodate one community you have to rob the other.

There are of course a number of tramps and a few on the street corners. They would like to ride in a Pullman instead of stealing a ride, but they are not of much value.

Mr. OUSLEY. But if they are the best that can be obtained we will have to use them.

Mr. HAUGEN. We have been getting them before. It is a hard proposition, but after all I do not think it is fair to rob the people of one State to accommodate another. It is a matter of policy.

Mr. OUSLEY. I want to assure you in the most positive manner that the Department of Agriculture would not, if we had a billion dollars, deprive the farmers of any one State to help the farmers of another State.

Mr. HAUGEN. How can you accomplish the result desired if there is not any surplus?

Mr. OUSLEY. We can be instrumental in serving the movement of those harvest hands that go from one section to another.

Mr. HAUGEN. But they go anyway. It is the money that attracts them, and they will keep on going as they have done in the past, and they will follow the harvest.

Mr. OUSLEY. Yes, sir.

Mr. HAUGEN. That is quite customary; for instance they start in Iowa and bind wheat for a few days, then move on to Minnesota and keep on moving.

Mr. OUSLEY. It is better for some agency to advise them where they are needed rather than to be seeking employment. That would save many days.

Mr. HAUGEN. Dollars and cents is going to determine that. Anybody that makes a business of following the harvesting for the

money there is in it will continue to do it. When you go outside of that then you rob a community of their help. We have been robbing the South of the services of the negroes. They have gone up North by the thousands, and if that is encouraged, before a long time we will have most of the negroes up North, because they get more pay up there, and after they get up there they seem to like it.

Mr. OUSLEY. Suppose you had finished your Iowa harvest and there were a thousand men no longer needed.

Mr. HAUGEN. There is no finishing in Iowa; our harvesting goes right on. They need labor for milking cows and other farm work all the year.

Mr. OUSLEY. Take Kansas, then. A thousand men have finished and are available to move to Nebraska. Under present conditions they drift along. They lose half a dozen days looking for some particular section where they are needed. If they knew, through the advice of our office, that they were needed immediately in a given community in Kansas, and they were facilitated in transportation, we would save four or five wasted days. It is exactly as in the case of the Bureau of Markets, where by being able to give intelligent information as to where vegetable perishables are needed they are enabled to get them there quickly, whereas they might spoil on the road drifting around looking for a market. That is the difference between doing it intelligently and letting it drift.

Mr. HAUGEN. Every patriotic citizen wants to do everything possible to increase production; there is no question about that.

Mr. OUSLEY. And we want to keep every man busy every day .

Mr. HAUGEN. But you can not increase production by robbing one section to aid another. I am afraid of the policy, and more so now than I was before, because I know of the results obtained in Iowa; and for the Government to go into our State and take our people away is an injustice to Iowa, and it would be an injustice to any community.

Mr. OUSLEY. I would like to make the point that the departments of the Government that have to do with labor are not doing that.

Mr. HAUGEN. I am telling you what has happened. I do not think anything is gained by it. It may be they need the miners in other localities, but I am simply stating the fact as it comes to us.

Mr. OUSLEY. We have no information except about farm labor, and I understand from Mr. Pearson that it is improving quite rapidly. Mr. Pearson is president of your agricultural college, and he reports the farm conditions are very good.

Mr. HAUGEN. He may report it, but we all know that labor is short. We were short before the war, and thousands have gone on account of the war. One man wrote me that he had a 486-acre farm for himself and one son to run. Two sons have gone to the Army and now the last one is going. He says he is 86 years old and no help to be had. You tell me that the labor situation in Iowa is favorable? Every report I get is that it is unfavorable.

Mr. MCLAUGHLIN. Where a notice reaches a town that there are a lot of laborers needed and there are a lot of men that can move from one place to another, that word reaches these other laborers that ought to stay that there are higher wages being paid somewhere else, and those men who ought to stay will go to the other place.

Mr. OUSLEY. The only point is that the private agencies are doing that now, and I believe our agency will do it with less disturbance than private agencies.

Mr. MCLAUGHLIN. As Mr. Haugen says, it seems to me that it is inevitable. I believe sincerely what you say, that it would be better done and more safely done through the Department of Agriculture than through private agencies. Are you doing, as we have heard that some other branches of the Government are doing, trying to unionize all labor; trying to extend it to farm labor?

Mr. OUSLEY. No, sir; I do not think there is any activity of that kind of which we have any knowledge.

Mr. HAUGEN. How much do you ask for?

Mr. OUSLEY. This bill asks for $162,000.

Mr. HAUGEN. We passed one bill the other day that carried a large amount. That is now in the Senate and is not likely to pass.

Mr. OUSLEY. The chairman suggested that, in view of the fact that that bill is likely to fail, this amount ought to be increased.

Mr. CANLDER. How much ought it to be increased?

Mr. OUSLEY. I would hardly like to say without consulting the men immediately in charge of these activities. I think it should be increased by a very considerable amount. I will have to consult with them and present it to the committee.

Mr. CANDLER. There has been some suggestion of duplication of this work as between the Department of Labor and the Department of Agriculture. What is the line of demarkation between their work?

Mr. OUSLEY. There is an agreement between the Secretary of Agriculture and the Secretary of Labor to the effect that the Department of Labor is particularly responsible for getting labor out of the cities that we may take for the farms, and we are particularly responsible in ascertaining the needs of the farms and distributing the labor in the country.

Mr. CANDLER. What work does the Department of Labor do?

Mr. OUSLEY. It is in touch with the whole mass of labor, and it has to do with all phases of labor.

Mr. CANDLER. There is no duplication of expenditures; there is absolute cooperation?

Mr. OUSLEY. Very close cooperation and correlation.

Mr. HARRISON. An agreement along the line indicated by Mr. Ousley was entered into between the Secretary of Labor and the Secretary of Agriculture on April 27, 1917.

Mr. HAUGEN. Do you know the amount spent by the Department of Labor?

Mr. HARRISON. No, sir.

Mr. MCLAUGHLIN. Do you know whether they have been following the plan suggested in the bill that passed, paying railroad fare and transportation?

Mr. HARRISON. No, sir; I do not think so.

Mr. MCLAUGHLIN. I do not mean your department.

Mr. HARRISON. I have not looked into it.

Mr. OUSLEY. I am quite confident there has been nothing of that kind done.

Mr. HAUGEN. How many people have you employed in the State relation service and for demonstration work in the field?

Mr. HARRISON. Under the emergency fund?

Mr. HAUGEN. How many are there scattered over the country?

Mr. HARRISON. Between 5,500 and 6,000 people engaged in extension work, including specialists, women in the cities doing home-demonstration work, county agents, club agents, and others. Dr. True is inserting in the record a full statement on that.

Mr. HAUGEN. Is it not possible that these 5,500 people might look into this matter and get the information needed?

Mr. HARRISON. They are doing it, Mr. Haugen. We only have one man in each State under this appropriation who is a sort of supervisor.

Mr. HAUGEN. Could not it be done through that service without appropriating money? I do not think we should expend money unnecessarily.

Mr. HARRISON. Almost every day somebody suggests that a new activity be put on the county agents, and they are overwhelmed with work now.

Mr. HAUGEN. Do you think it is necessary, with 5,500 people in the service, to send additional men to find out whether there is any surplus of farm labor?

Mr. HARRISON. We have a man in each State whose special job is to look after farm-labor problems for the Department of Agriculture, and he works through the county agents, who report to them whether and when there is any need for additional labor.

Mr. HAUGEN. Could not that be done under the organization you have? Is it really necessary to set up an organization here?

Mr. HARRISON. That was very thoroughly considered by the Secretary in April a year ago. The conclusion was reached that a man should be assigned to each State who could devote his entire time to the task. The results have justified the establishment of the system.

Mr. OUSLEY. There is one of these farm-help specialists for each State, 48.

Mr. HAUGEN. There are 5,500 people altogether. I do not care where they are; they are in the service.

Mr. OUSLEY. Here is a county agent in each of the counties of your State. Under the present method we are simply paying a farm-help specialist in that State, to whom these county agents will report their labor needs and the labor conditions, setting up the necessary machinery to carry that work on. The whole amount is only $162,000. The question of transporting farm labor does not come under this at all. That arose out of the chairman's suggestion that the other bill might fail. This is simply to pay a man in each State to keep in touch with all the agents and to assemble their needs and serve them. It is a supervisor for the whole State.

Mr. MCLAUGHLIN. You have a State agent in each State to look over the work of the county agents, and in some States the State agents have one or more assistants?

Mr. OUSLEY. Surely.

Mr. HAUGEN. Is it possible that your head men are so pressed that they could not take less than 15 minutes to direct a circular to these county agents, or to all the agents in all the Western States, and give the information desired inside of a few hours?

Mr. Ousley. If that were all that was necessary to be done.

Mr. HAUGEN. How are you going to ascertain the number of men that are available? There are agents traveling all over the country,

and they ought to have some knowledge of the conditions. I should think that would be one of their most important functions. If he is to be of any value whatever he ought to be looking for the needs and requirements of the farmers.

Mr. OUSLEY. It requires contact with every city in the State where there may possibly be a supply of labor.

Mr. HAUGEN. As a general thing in the farmers' communities we do not have any large cities.

Mr. OUSLEY. I mean, every place of five or six thousand people where there may be a surplus of labor.

Mr. HAUGEN. What I am most concerned about is robbing one community of its labor, and in so doing you will not improve the situation. I am more concerned about the food supply than anything else; we all know our boys can not fight unless they have something to eat, and we are all interested in that.

Mr. OUSLEY. I can only answer your apprehension on that score by saying I can not conceive of the Department of Agriculture robbing one agricultural community to serve another community. They all look alike to us.

Mr. HAUGEN. I mean States.

Mr. OUSLEY. Or rob one State to supply another.

Mr. MCLAUGHLIN. This man is selected, and he goes into a State to have supervisory control. How do you get that man?

Mr. HARRISON. I think the practice has been—and Dr. Wilcox can verify what I say—to get in touch with the director of extension work and the official who happens to be dealing with labor matters in each State, and to request them to submit a joint recommendation as to the man best qualified to handle the work. That has been the practice in every case.

Mr. MCLAUGHLIN. Is he employed temporarily?

Mr. HARRISON. He is employed for the duration of the emergency.

Mr. WILCOX. Those appointments were authorized by the Civil Service Commission to meet this emergency situation. They authorize the employment of these men, because we felt we had to rely largely upon the local authorities to recommend the men.

We sounded out in the first place the possibility of using men already in the extension service, and we received protests right off from the State leader of the county agents that neither he nor the director of extensions could possibly undertake such supervision of the work, because they had too much to do. There must be some man who can spend all of his time, and so we asked for a joint recommendation by the director of extensions and by the public safety commission, or the council of defense, or the commissioner of labor if they had such a man in the State, so that this man would have the backing of all these agencies in the State that were concerned officially with the farm-labor problem, in order that he could get a really unified and harmonious plan that would receive the support of everybody.

Mr. MCLAUGHLIN. How much is he paid?

Mr. WILCOX. They are paid from $1,200 up to $2,100.

Mr. MCLAUGHLIN. They get clerical help?

Mr. WILCOX. They get clerical help from the State, in the office of the extension force of the college or the commissioner of gardening or the State council of defense.

Mr. MCLAUGHLIN. Do you use any of your money for clerical help?

Mr. WILCOX. We do not.

Mr. MCLAUGHLIN. Or any kind of assistance for this man?

Mr. WILCOX. We have granted in a few instances temporary help in making this farm-labor survey.

Mr. MCLAUGHLIN. Do you allow traveling expenses?

Mr. WILCOX. Traveling expenses, $75 a month.

Mr. HARRISON. He is paid only his actual traveling expenses.

Mr. MCLAUGHLIN. That is the limit?

Mr. WILCOX. We have had to increase it in instances where the work absolutely required it.

Mr. HAUGEN. You now have one man in every State?

Mr. WILCOX. In practically every State. Arizona and New Mexico have one man. We started out to have one in every State, but the fund would not allow us to put up a man in every State, and we would not have been able to increase it if there had not been some delay in getting appointments, so that there was a balance which accumulated. To have this man in the State cooperating with the county agents, and with the State council of defense, has been found to be the only possible method, for the reason that there are so many agencies operating at cross purposes or starting off with some kind of a campaign without consulting the other fellow; and when you have a man who represents all of these agencies he harmonizes them and brings them together and prevents a duplication of effort, and brings about harmonious cooperation. In several States we have a complete union of the State agricultural commissioner, our department, the Department of Labor, and the State department of labor working together upon the project, and they agree on what each is going to do; and that matter is being worked out very rapidly in each State. The amount of work that comes on the man who has charge of this business in each State, our farm help specialist, is so great that many of them are urging and asking for assistants, but we can not give them the money for that.

Mr. HAUGEN. How long have you been engaged in those activities?

Mr. WILCOX. We started in before the passage of this bill. We sent out some men from our office and organized the work.

Mr. HAUGEN. To what extent have you aided in supplying people to help?

Mr. WILCOX. I do not know that we could say. There was that report from New York last year that they got 13,000. That referred to permanent men, all-year-round men. They are placing in Ohio some 800 or 900 men a month. In North Dakota they are putting in something like 200 or 300 men a month, according to our reports. That is largely for permanent work, permanent employment. The number of men temporarily supplied is very hard to estimate.

Mr. HAUGEN. Where do the people come from?

Mr. WILCOX. Those men are taken from the cities and they are sent back to the farm. They are men who have had farm experience and who have found that they can not live in the cities and can not get salaries big enough to keep them alive in the cities, and they want to go back to the farm and we have put them back. It is simply a readjustment of the economic condition that has gotten altogether misplaced, by having too many people go from the farms into the cities, and we are right after those fellows, getting them back.

Mr. HAUGEN. That is good work.

Mr. WILCOX. The main duty of these fellows is working at that permanent readjustment of the economic conditions between the city and the farm.

This harvest work is of a different nature. It looks as if we were robbing one place to supply another. But here is a huge army. I have talked with thousands of them. They have followed this business for six or eight years, and the vast majority of them do it as a vacation. They are engaged in something else, and they like to do that. They start at Oklahoma and go to North Dakota, and they get blistered and sunburnt and toughened up, and then they go back to their regular work.

Last year we had difficulty because of the lack of organization, which we are trying to overcome by this system.

Mr. HAUGEN. What I am interested in is getting these men back from the cities to the farms.

Mr. WILCOX. Those men know their work, because they have been on farms before.

Mr. HAUGEN. How many are you getting of the people that have had experience in farming?

Mr. WILCOX. Last year we got 13,000 in New York.

Mr. HAUGEN. How many of those do you think were experienced?

Mr. WILCOX. They were all experienced men, because that is the only kind they would take. They wanted them for general, all-around work, and you can not put any other kind on a New York farmer. They had all had experience. In New York City they had a man there who could stay and hand pick these men, and he found that approximately 10 per cent of the fellows that came looking for work had had previous farm experience. They were not the down-and-outers; they had just gotten out of a job and were looking for most anything, and by having an agricultural man there we could pick them and put them back on the farm, and 90 per cent of those men are making good. We hear an awful amount of kicking about the men who did not make good.

Mr. YOUNG of North Dakota. How do they get down-and-outers to the farms?

Mr. WILCOX. In New York they require a farmer who wants a man permanently to send down a certain part of the transportation, or all of it. These men then take the responsibility of picking the men and putting them on the train and checking their baggage to the destination, and the farmer comes to get them. That was by private arrangement with the farmers, because there are some of those men who are very good, who want to go back to the farm, but who actually have not money enough to pay the railroad fare, and since we did not have any means of furnishing it the farmers themselves advanced it.

Mr. CANDLER. We have been very glad to have you here, gentlemen.

(The estimates of the Bureau of Chemistry were discussed, beginning at 10.57 a. m., following Mr. Reese's statement, reported elsewhere in these hearings.)

Bureau of Chemistry.

STATEMENT OF DR. C. L. ALSBERG, CHIEF OF THE BUREAU OF CHEMISTRY, UNITED STATES DEPARTMENT OF AGRICULTURE.

The Chairman. Dr. Alsberg, the first item is on page 51, "Poultry and egg demonstrations."

Dr. Alsberg. That item, I think, is rather fully explained. But we can save time if you will ask me questions.

The Chairman. This is Dr. Pennington's work?

Dr. Alsberg. Yes. It has been speeded up very greatly, because the Secretary has assigned to that work an allotment of $20,000. As a result, it has been possible to put on an additional force to demonstrate the improved methods of packing and transporting poultry and eggs. It has been possible to organize small packing houses in territory where they did not exist and whence the eggs were shipped in poor condition. An example is the Imperial Valley of California, where we find an excellent turkey-producing section. There was no packing house there—and I am not using the words "packing house" in the sense of the Chicago packing houses. Due to lack of knowledge concerning the transportation of poultry, which is perishable, shippers lost every year an appreciable amount of the turkey crop and received a poor price for much of the remainder because of the bad condition in which it reached its destination, which injured the reputation of all the poultry from that section. Because of our efforts, adequate packing facilities have been provided in that section, which have taken care of the turkey crop, shipping it to various points on the Pacific coast, with the result that the producers suffered practically no loss from transportation and shipping. It is a pretty safe guess that this section will produce this year a great many more turkeys than ever before.

The Chairman. This is not investigational work?

Dr. Alsberg. It is not investigational work at all, but simply the demonstration of what has already been proved of value, and its introduction into a larger territory. It involves intimate contact of our agents with the individual shippers and producers.

The Chairman. Are there any questions on that, gentlemen? If not, take up the next item, "Sirup demonstrations."

Mr. Wason. This area you have been working in is the Middle West, I take it, largely?

Dr. Alsberg. The Middle West and the Southwest, and this year we have undertaken for the first time some work on the Pacific Coast; that is to say, our work has covered practically the territory between the Appalachians and Rocky Mountains, including Texas and the northern parts of Mississippi, Alabama, and Louisiana, excluding perhaps 100 or 150 miles along the Gulf, which is not yet a good poultry country, although there is every reason to believe that it ought to be, and some work which we did in California, particularly in the Imperial Valley and around Petaluma and Sonoma.

The Chairman. Take up the next item, "Sirup demonstrations," on page 52. There is no change in that.

Dr. Alsberg. There is no change in that allotment. I believe that we in this country have it in our power to supply our needs for

sweetening agents to a very large extent through the production of sirup. There is no particular object in crystallizing out sugar from the juices of plants, except for the convenience of handling, since it is more convenient to handle a solid than a liquid, and except for the removal of the molasses flavor in the process of crystallization. It should be possible very greatly to stimulate the production of sirups by means of this appropriation.

Two years ago we demonstrated the production of sirup that would neither crystallize nor ferment in a number of places in Georgia, northern Florida, and in Louisiana. There were produced at those various places in which we made our demonstrations that year a couple of hundred barrels of sirup of such improved quality that 10 cents a gallon above the best price paid in those years for that type of cane sirup was offered for it on the New Orleans market.

Last year we made our demonstrations under this appropriation in a larger number of cases, but the total amount of sirup produced by our improved methods was not any greater than in the previous year, because the price of sirup was so high, with the lowest grades of molasses selling up to 18 cents and over, that there was no incentive for the producer to change his methods. It was, however, more widely demonstrated, so that it is anticipated that this year more fine sirup capable of replacing sugar will be produced.

Mr. Anderson. Does this method of yours involve any radical changes in the manufacturing process?

Dr. Alsberg. No. If you are interested in the details, Mr. Anderson, the method is simply this: When cane sirup is customarly produced it is boiled down far enough so that it will not ferment, it sugars off and becomes unsalable. When it is not boiled down far enough it sours and ferments. This method consists in treating the sirup after it has been boiled down nearly to the desired consistency with yeast extract, prepared in a certain way, which converts a portion of the cane sugar in the sirup into the invert sugar, which is present in honey. You know, honey will not crystallize under ordinary conditions. The only equipment required is a cypress tank into which to run the sirup so that it can stand over night mixed with a small quantity of the yeast extract. It has been very difficult for us to get the production of this yeast extract organized on an industrial scale. We have now had it taken up by breweries, which are anxious to have something else to manufacture besides beer. Last year we worked not merely with the farmers, but on a large scale with the Sterling Sugar & Railway Co., at Franklin, La. This is not a refinery, but a sugar factory serving a large number of some sugar cane planters in Louisiana. I think they are planning now—of course I would not say that they will not for good reasons be compelled to change their minds by next fall—to go into the production of this type of sirup in that section on a considerable scale. I believe that the production of this type of sirup may in some sections be more profitable than the production of white cane sugar. We believe that it is going to be a great help to planters in that general section of the country. The production of this sirup may help out sugar factories in seasons when sugar cane is very plentiful because it is possible to make sirup much more rapidly than it is to produce sugar, consequently the grinding mills of a factory can operate to a full capacity, and that portion of the juice which is in excess of the capacity

of the sugar-making equipment can be boiled down to sirup. Economically this factor may prove to be a very important point.

The CHAIRMAN. Is there anything further, Doctor, on that item? Are there any questions?

Dr. ALSBERG. Unless there are any questions, that is all.

The CHAIRMAN. All right, take up the next item on page 53, "Preparation of sweet sirups."

Dr. ALSBERG. Aside from sugar cane, to which the appropriation we have just discussed is limited, we believe that it is possible, by the use of a peculiar form of carbon or charcoal, which we have developed in the bureau, to prepare profitably and from a number of products, particularly grapes, a sirup which should have a great future and which should help to meet the sugar stringency. It may be interesting to you to know that under some of the investigational work that we have done on sugars and sugar production we have been studying charcoals for the purpose of developing one to replace bone black, and be very much better than bone black. At present one of the reasons why it is necessary to invest such enormous sums in refinery equipment is that enormous clarifying plants using bone black are necessary. Bone black can not be used very many times without losing more or less of its power. We have developed a method of making from various woods charcoal, which is twenty or thirty times as valuable as a decolorizing agent as bone black, and which should bring down the cost of refining sugar very much, because it will increase proportionately the capacity of the plant. So far this has been worked out experimentally only on a laboratory scale. In the laboratory it is a success, not merely in refining sugar, but also in taking out disagreeable flavors and colors from fruit juices. In this way we have prepared sirups on a laboratory scale from various materials like grapes. If this item is allowed, it is proposed to make actual demonstrations of these methods. While they can be used in a factory, they are not necessarily factory methods, and I believe that we can develop and cause to be produced a quantity of sirup from materials like grapes that in some sections of the country have not a suitable market, wine grapes, for instance, which will conserve that amount of food and enable the owner of the vineyard to get something at least while he is readjusting himself, without the investment of very much capital, and by operating on a rather small scale.

Incidentally, although this has nothing to do with this appropriation, while these investigations began in the bureau five or six years ago, without any thought of war, they have been of very great assistance to the War Department, in putting that department on the right track in the production of the proper kind of charcoal for use as a protection in gas masks. It is not a military secret that one of the ingredients in the gas mask is charcoal. All charcoal is not alike. Whether a charcoal has the power of absorbing gases depends in part upon the method of its preparation. When it became necessary for the War Department to organize the construction of gas masks in a hurry, our experts on charcoal were of great assistance. We have nothing to do with it at the present time. Our work was simply in getting the thing started.

The CHAIRMAN. All right, take up your next item, "Handling, transportation, and storage of fish," $5,000 increase.

Dr. ALSBERG. It is, of course, perfectly evident that if we can increase the consumption of fish, that represents a pure gain, since they come out of the sea, and their use in no way exhausts the land. During this last year we have devoted ourselves particularly to several branches of this work. In the first place, we have been educating the shippers and the railroads, with some success, to taking and transporting the fish from the warm southern waters, where the supply of fish is very great to the northern markets in a manner that will not cause loss or deterioration. In consequence the railroads of the southeastern part of the country are now actively engaged in improving their facilities.

They are most interested in the proper kind of refrigeration, and in many instances have installed the proper kind of a special service for transportation of the fish. That, of course, has been good business for them, but it has also been useful in making available as food a large amount of fish that otherwise probably would never have reached the northern markets. At the same time we have been cooperating with the Bureau of Fisheries, and inducing the fishermen to take advantage of the facilities which we have been able to get the railroads to offer. The division of work under this arrangement between the Bureau of Chemistry and the Bureau of Fisheries is that the Bureau of Fisheries does, as it always has, the work that has to do with the catching and landing of the fish, whereas we handle the question of the utilization of this perishable product, since the department, of course, has had the work of the utilization of perishable products of all kinds for years. We have had close cooperation with the Bureau of Fisheries.

Another line of work is the demonstration of the proper methods of freezing and storing fish. Take Florida, for instance, with ice-producing plants up and down the west coast, and an abundance of fish in its waters. Gluts on the market occur there and the transportation is not what it might be. It has been our endeavor to persuade ice-making plants to put in little fish freezers to take care of the gluts as they come, so that the fish will not spoil, but will be made available for shipment north. At the same time we are helping to have canneries put up in that territory, in connection with fish freezers, to utilize more of the excess production that can not be shipped in a hurry. At the same time we have induced the railroads to establish their freight and express schedules. So that the service for the fishermen to ship fish is very much better than it has been.

Mr. OVERMYER. Is there any Federal limitation as to the length of time that fish can be kept in cold storage?

Dr. ALSBERG. There is no Federal limitation on the cold storage of food of any kind, so far as I am aware.

Mr. OVERMYER. I know there is a great deal of it done down along the shores of Lake Erie in my district, and I was wondering whether there was any State of Federal limitation on the length of time that they could be stored.

Dr. ALSBERG. I know of no Federal limitation. There are a number of State limitations. The State of Pennsylvania has a limitation of, I think, 10 months on fish, poultry, and eggs. The State of New

Jersey and the State of New York have no limitations, I believe, with the result, of course, that there has been an increase of new construction in New Jersey.

Mr. OVERMYER. I have been in some of those cold-storage houses along Lake Erie, and although I am not an expert it seems to me that the products kept in the refrigerators that they have there would keep indefinitely, when the temperature was kept the way it was there.

Dr. ALSBERG. I think there is no question about that. The trouble with cold storage is that under some conditions food loses its flavor, which makes it from an esthetic standpoint less desirable.

From the standpoint of food value, if the temperature has been kept low, as it should be, there is no appreciable effect on the food value. In the case of fish, we have, in addition to that, the peculiar method of freezing used. The fish are chilled below the freezing point, and then dipped in water. Of course, they are colder, being below the freezing point, than the water in which they are dipped, and a hermetic seal of ice is formed around each fish. In time there is an evaporation of water from ice. Therefore the dipping of the cold fish in the water is repeated at intervals of some months to keep the seal of ice around each fish intact. Little fish, like smelt, are sealed several hundred in a block. That is the method of handling we have been pushing in the South, and I think we will succeed in having conserved in that way a good many thousand pounds of fish that would not be conserved otherwise.

The CHAIRMAN. Are there any questions on that, gentlemen? Now, take up the next item, "Waterproofing leather for Government and farm use."

Dr. ALSBERG. The Bureau of Chemistry has been working on this project for some years, since it seemed to us that if it were possible to develop simple methods of treating cloth, duck, and canvas which a farmer could apply himself it would be of great value in treating such material on the farm. For example, covers for alfalfa stacks, for machinery, and all that sort of thing. The War Department and the Council of National Defense found the need for information of that kind and came to us for it. That has resulted in demands being made on us to speed up this particular piece of work, on the funds already available. So we are asking for a small sum for what is really, in a sense, a war project.

Mr. YOUNG of Texas. What is the nature of the waterproofing proposition?

Dr. ALSBERG. Water and mildew proofing, depending on the particular conditions. The Army wants a lot of such information. We have been doing a great deal of work on water and mildew proofing of tents, khaki, and similar fabrics and articles for the War and Navy Departments.

Mr. YOUNG of Texas. Mr. Bankhead, of Alabama, called to my attention the other day some samples of new waterproof goods, brought from New York down here. One piece looked just like an ordinary mosquito netting, but it had been treated under some system they have discovered up there. You could pour a tumbler of water on it and it would not go through.

Dr. ALSBERG. You mean although the fabric was open?

Mr. YOUNG of Texas. Yes.

Dr. ALSBERG. The theory of that treatment is this: You all know, of course, that if you put oil on water it collects in lumps, and that there is a sort of repelling action, which the physicist calls negative capillarity, between anything like oil or grease and water. Now, if you treat the fabric with a chemical which does not let water wet the fabric there is a tendency for the fabric to repel water. It will not become wet easily. Until it becomes wet it does not let anything through, unless the holes are very large. You can see how it is really a relatively simple matter, when you look at it from that angle. The fabric was undoubtedly treated with a soap of a metal, probably aluminum oleate, a very successful way of waterproofing. It is not very permanent, however, because the impregnating materials are liable to rub off.

Mr. CANDLER. I took my own blotter and put under it, and no water came through it.

Dr. ALSBERG. When these fabrics are greased with the right kind of a preparation, water will not wet the fabric. If you rub any fabric with your finger and force the water through the meshes, it will leak through at that place, but nowhere else for a long time. You force the fabric to be wet. If it does not become wet, the water will not come through so readily.

The CHAIRMAN. All right. We learn a lot of new tricks here every day. Take the next item. "Serviceability tests of leather and leather substitutes."

Dr. ALSBERG. This item is somewhat analogous to the previous one. We have long done work on the examination of leather and upon the wearing quality of various leathers. We wish to speed the work up because the War Department has made heavier demands upon us in this direction than we can meet with the funds available. Now, we have in this cooperation with the War Department—for which, by the way, the War Department is in part paying by detailing to us chemists who happen to be drafted—a great opportunity to carry on intensively work which it would otherwise take us years to complete. We have the opportunity of making experiments and observations on an enormous scale in connection with the equipment used by the soldiers, which would give us more information if he had the funds to avail ourselves of the opportunity than we could get by years of work in peace times. The funds are asked for the purpose of carrying out the extra work which the War Department is asking us to do, and for the purpose of taking advantage of the opportunity offered by the existence of the Army. We are not experimenting upon the Army, of course, but make experiments by observation of what the War Department is doing. We believe that we can secure an immense amount of information if we have a little extra money to take advantage of the present conditions, and, incidentally, we are doing a lot of work for the War Department that we have difficulty in meeting with the funds now available.

The CHAIRMAN. All right. Take page 55, "Utilization of wool-scouring wastes."

Dr. ALSBERG. There is very little to be added to the statement there. The fact is, as you all know, that wool is scoured to remove the so-called wool grease which is on the wool. Now, in this country it is very largely wasted. In Germany and, to a lesser extent, in France

and in England the scouring is done under conditions which make it possible to recover this wool grease. It was first recovered for medicinal purposes. You may recall that the greasy material known as lanolin is really only purified wool grease. It has practically completely replaced tallow and other solid fats in the pharmaceutical industry in preparing ointments, pomades, and cosmetics. The reason it has replaced animal fats is that it does not turn rancid and never acquires a bad flavor or odor. Chemically, it is quite different in nature from ordinary fat. Having no food value either, it is used very largely in pharmacy and also in the industries for a variety of purposes where a greasy material that will not turn rancid nor decompose is required. We have always imported that material from abroad, mostly from Belgium and England. There is a shortage of it now, and it seemed to us that it ought to be possible to greatly develop the industry in this country.

Mr. McLaughlin. Was it gotten in the same way over there? Is it the same substance entirely over there?

Dr. Alsberg. It is the same substance. Wool fat is, I think, the only source of lanolin that is commercially used at the present time. Of course, there is a certain amount of the same kind of material in hair oil. In other words, it is really the secretion of the tallow glands at the base of the hair, and you find it on all hair, but wool is the main source of it.

Mr. Candler. These are very remarkable figures you give here in this item. It says here there are approximately 500,000,000 pounds of unscoured wool used in this country annually. This contains approximately 75,000,000 pounds of wool grease, worth normally $2,250,000 (at the present time $10,000,000), and 25,000,000 pounds of potassium carbonate, worth normally $750,000 (at the present time $15,000,000).

Dr. Alsberg. Those are the average figures if we were to recover all of that material. As you know, wool shrinks very much in the process of cleaning, scouring, and preparing it for spinning yarns. During the cleaning process preparatory to spinning yarn some kinds of wool shrink 50 per cent, part of which, however, is dirt. I think these figures are conservative. They do not mean it would be commercially feasible or commercially practicable to obtain that quantity of material, but they do indicate that it should be commercially feasible and practicable to conserve and recover enough to make it worth while taking the gamble that we may be able to develop this particular industry for the products of which there is now a great demand.

Mr. Haugen. Have you knowledge of the process?

Dr. Alsberg. Unfortunately, we have not in this country a general practical knowledge of methods of economical commercial recovery and purification, but only a theoretical knowledge of the process, this being again one of the things which has been kept rather secret abroad, and also because the materials have been so low priced that our people have been little interested. We know what the process is, but we do not know the details of operating most effectively.

The Chairman. Is there anything further on that item, gentlemen?

Mr. Candler. This is intended to be used, I understand you to say, in the waterproofing of shoes for the American Army.

Dr. Alsberg. The point is this. One of the very best stuffings for leather, and by stuffings for leather I mean the grease that is worked into the leather to make it waterproof, durable, and pliable, is wool grease, and the highest grades of leather are very frequently treated with a mixture of oils and this material.

Bureau of Entomology.

STATEMENT OF DR. E. F. PHILLIPS, APICULTURIST IN CHARGE OF BEE-CULTURE INVESTIGATIONS, BUREAU OF ENTOMOLOGY, UNITED STATES DEPARTMENT OF AGRICULTURE.

(The following statement by Dr. Phillips on the estimate for "Extension work in beekeeping," was made on Thursday, April 25, 1918, beginning at 10.30 o'clock a. m.)

Mr. Lee (acting chairman). I understand that Dr. Phillips is here and, as it will be necessary for him to leave the city to-day, we will take up an item out of the order in which it is printed in the estimates. The item in which he is interested is on page 56, "Extension work in beekeeping." He will tell us about that.

Dr. Phillips. When I had the pleasure of appearing before the committee in regard to the regular appropriation bill, I explained in detail our work in bee culture, so that at this time it probably will not be necessary for me to repeat all that I stated then. Under the present regular appropriation we had set aside $8,360 for the bee-culture demonstration work, to which is added $15,000 from the food production act. The pending regular appropriation carries an additional $15,000 for the regular fund, all of which will be applied to the demonstration work. The combination of funds enables us to have in the field at the present time 11 men who are devoting their entire time to the work of increasing honey production in 1918. As I explained to the committee on a previous occasion, we are now producing in this country 250,000,000 pounds of honey, which is only about 3 per cent of the sugar supply of the country. There is in the nectar of flowers in the United States more sugar than is consumed by the American people from all sources, and it will be seen that we are wasting a tremendous lot of very valuable food by not extending bee culture in the country. Now, of course, it is impossible to save all this vast sugar supply. We have no such visionary idea as that, but we do feel that under the present circumstances we should work to the utmost to conserve all we possibly can. All our men are working to the ideal of making honey production a real industry, not merely a plaything as so many people have thought of this work. We now have an excellent force of men, men of really high grade, all of them experienced commercial high producers, engaged in this work, so that they can attack this problem from the proper angle and can really teach a very practical method of bee culture.

I may say that the chief difficulty of beekeeping at the present time is on account of the excessive winter losses in the clover region in the northeastern section of the United States. The winter loss in the past winter has been over 40 per cent of all the bees in this section. That could all have been prevented by proper methods. There will, of course, be accidents to colonies of bees in winter which will cause them to die, but so far as regular winter losses are concerned they

are entirely preventable. Our men are teaching the methods which eliminate this loss, and we have met with a considerable degree of success so far as our men have been able to get into the field early enough to ward off this loss.

Mr. LEE. You have sufficient force to put into the field?

Dr. PHILLIPS. We have only 11 men. Of course with 800,000 beekeepers in the country they are not going to be able to reach them all. Our men are centering their efforts in the parts of the country where we may expect the greatest increase in 1918, and we go into the part of the State where the beekeepers are rather well started, and we can take those already well informed and help them to do better. It is not now so much an effort to build an industry from the ground up, to educate the people from the beginning, but the object is to take those already in the work and make them still better beekeepers.

Mr. LEE. Any questions?

Mr. LESHER. Was there no way for you to have reached those people in the northeastern part of the country this winter?

Dr. PHILLIPS. We did our best with the men we had available, and we also used circularizing and press notices, and there were a great many we know who followed our advice, but we could not reach them all, and the loss has been heavy. However, I may say to compensate for that loss there is now going on a tremendous shipment of bees from the Southern States, excess colonies from the Southern States, to replace those, and there will be thousands and thousands of colonies of bees shipped North within the next two or three weeks.

Mr. LEE. Any further questions?

If not, we will return to page 20 of the estimates, Bureau of Entomology.

(At this point other estimates of the Bureau of Entomology were discussed. See Mr. Marlatt's statement, reported elsewhere in these hearings.)

COMMITTEE ON AGRICULTURE,
HOUSE OF REPRESENTATIVES,
Saturday, April 27, 1918.

(The estimates of the Bureau of Biological Survey were presented, beginning at 12.16 p. m., following Dr. Alsberg's general statement, printed elsewhere in these hearings.)

BUREAU OF BIOLOGICAL SURVEY.

STATEMENT OF MR. E. W. NELSON, CHIEF OF THE BUREAU OF BIOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. Dr. Nelson, will you run over your items quickly?

Mr. NELSON. The first item is that of $100,000 for controlling noxious rodents, which include prairie dogs, ground squirrels, jack rabbits, pocket gophers, and others. Noxious rodents are practically everywhere in the United States wherever agricultural crops are produced. In the arid sections west of the Mississippi conditions are so favorable for rodents that they exist there in excessive numbers.

The losses from all of these agricultural pests are very great. The directors of State extension services have submitted estimates of annual losses in various States running up to from $6,000,000 to $30,000,000. In Montana the director made it about $20,000,000 a year. In North Dakota it is from $6,000,000 to $9,000,000. The country loses a total of more than $150,000,000 annually from this source, mainly in foodstuffs, and about $200,000,000 annually from the depredations of house rats. It is a practicable proposition to eventually completely eradicate these rodents at a moderate cost and thus wipe out the losses from this source, thereby directly adding that much to the agricultural production of the country.

The Biological Survey has been engaged for several years in a campaign against rodent pests under a regular appropriation.

Since the war began the people of the West have suddenly become very much alive to the great losses caused by these animals, and this year they have already appropriated more than $250,000, which they are spending in cooperative work mainly against rodents under the direction of the experts of this bureau. California has established a State organization for the suppression of the rodents on private and State lands and is now conducting a vigorous and extended campaign. They took our expert away from us at twice the salary we were paying him, and, including labor and supplies, must be spending several hundred thousand dollars this year in the eradication of the California ground squirrel. They have appropriated $40,000 to use on the State lands, mainly school lands. Aside from this, the counties are running great campaigns.

Both in California and elsewhere the people constantly apply to us for help, stating that they are surrounded by Government lands, and although they are exterminating the pests on their own lands, they are being reinfested from the surrounding Government lands. The Biological Survey is cooperating with them so far as is possible with our limited funds, but the field is an enormous one and the need is urgent for more help from the Government.

A number of the Western States have put up money and asked us to increase our work there. The Secretary has granted in allotments a total of something over $60,000 out of the existing emergency fund to meet equal sums which have been put up for work in several States. The calls for assistance are increasing rapidly and we find it an impossibility to meet all the urgent demands made upon us.

The CHAIRMAN. Doctor, as a matter of fact, this work is really an extension of your regular work, simply speeding up the States, is it not?

Mr. NELSON. Yes, sir; that is exactly what we wish to do. Our regular appropriation has heretofore been spent mainly on the stock ranges of the public domain, more or less irrespective of the agricultural situation. Since the need for speeding up on food production became apparent, we have been concentrating our men in the farming sections, trying to make the money count so far as possible in actual increase in the food output. Last year in North Dakota more than 16,000 farmers were engaged under our guidance in cooperative work against these rodents, and the estimate has been made that as a result a saving of crop output was made amounting to from $1,500,000 to $2,000,000. Our work is devoted mainly to furnishing expert assistance and guidance to the farmers and to clearing the

Government domain from rodent pests immediately about agricultural lands. The emergency money asked for here is to be allotted to speeding up the program in the different States where we can do the most good.

I think the best proof that we are accomplishing the object of our work in a satisfactory degree lies in the fact that the people on the ground are putting up their own money on a large scale to be expended under our guidance. That and the rapidly growing demand at the present time for assistance in this work for the expressed purpose of increasing the food output both point to the practical utility of the work in the present emergency. It has been estimated in many places that the rodents destroy from 5 to 25 per cent of the crops. Wherever we can work we can save the major portion of this.

Mr. HAUGEN. You were speaking of North Dakota. North Dakota has been doing this for years.

Mr. NELSON. North Dakota?

Mr. HAUGEN. You spoke about the States spending a lot of money. What is being done in these States is that they are sending out people to destroy the rodents and taxing the expense against the land. They have been doing it for a number of years there.

Mr. NELSON. The people of North Dakota, it is true, have been trying to kill off the ground squirrels for many years, but the work was carried on in such a way that it was practically impossible to obtain any reasonable success in stopping losses. The result was that the farmers were so discouraged when we first went in there we had some difficulty to interest the director of the State extension service in the work, but he did take it up, and after the first season became so deeply interested that it became the largest item on the State extension-work program for the State. According to Director Cooper, this was the most successful work he had been connected with in the State. Last year the farmers of North Dakota destroyed most of the ground squirrels on about four and a half million acres under our guidance.

Mr. HAUGEN. But they have been doing it for years.

Mr. NELSON. Yes; after a fashion, but not in an organized and effective method.

Mr. HAUGEN. They are the ones that initiated it.

Mr. NELSON. But they were unsuccessful. We have organized the work and improved the methods, so that the beneficial results have been convincingly evident.

Mr. HAUGEN. What progress are you making? Congress has been increasing these appropriations materially every year.

Mr. NELSON. Last year in North Dakota it was estimated by the people on the ground that they covered four and a half million acres and got 77 per cent of these pests. Since we began work in that State, the ground squirrels have been nearly all destroyed on about 9,500,000 acres. This year they will go over the same land as last season to kill those that are left in addition to treating more than twice that area of new lands. They will go over new lands in North Dakota each year and expect to completely wipe out these pests within a few years. We plan to completely eliminate them so that losses from them may be permanently ended.

Mr. HAUGEN. You know Congress has been increasing this appropriation with the understanding that in a short time gophers might be exterminated, but it seems that the gophers are actually increasing.

Mr. NELSON. The areas occupied by them are decreasing. For instance, on the public land we have destroyed the prairie dogs and ground squirrels on more than three and a half million acres.

Mr. HAUGEN. How many more acres are there to be covered?

Mr. NELSON. Rodent pests of all kinds are doing damage over more than 200,000,000 acres of the public domain.

Mr. HAUGEN. Two hundred million?

Mr. NELSON. Two hundred million acres. More than $150,000,000 in crop output is lost every year through these pests.

Mr. HAUGEN. How many million acres have been cleared?

Mr. NELSON. We have cleared more than three and a half million acres on the public domain.

Mr. HAUGEN. Out of 200,000,000 acres?

Mr. NELSON. Out of 200,000,000 acres, but not all of this is sufficiently infested to necessitate treatment.

Mr. HAUGEN. You are not making very much progress, then?

Mr. NELSON. The point is that every dollar we spend in suppressing these pests results in several dollars return or increased gain from the land.

Mr. HAUGEN. At the rate you are going, it will take 200 years.

Mr. NELSON. No; the work will be done in far less time, because we are getting the local people interested and they are spending their own money in this work.

Mr. HAUGEN. On the public lands?

Mr. NELSON. No; on their own land. But the destruction of rodents on private lands renders the work easier on adjacent public lands.

Mr. HAUGEN. How about the public lands?

Mr. NELSON. On the public land it is going to be a long process, but definite progress is made each year.

Mr. HAUGEN. You have been doing it several years and have cleared three and a half millions out of two hundred million.

Mr. NELSON. That gives an erroneous idea of the value of the work. The total expenditure, as compared with the results, is small, but it is true the problem is a large one.

Owing to the settlement of the country, many of the natural enemies of these pests have been killed, and the result is their rapid increase in areas where they are not interfered with. To not destroy them would result in the rapid destruction of the ranges over great areas by them, as well as enormous losses in crops. One cattleman near Flagstaff, Ariz., stated that the prairie dogs had increased to such an extent that he had the choice of either destroying them or going out of the cattle business. He planned to expend any sum up to $3,000 this year under our direction in this work. A small farming community in northern Arizona was reported to have benefited by an increased value of more than $25,000 in its crop output as the result of a short spring campaign we made there last year.

The CHAIRMAN. Is there anything further, Mr. Haugen?

Mr. HAUGEN. Would it not be better to interest the States in passing specific laws to exterminate them?

Mr. NELSON. In California and several other States they have laws providing for the destruction of these pests on private and State lands, but they require the Government to take care of its own land and desire our expert assistance in their work.

Mr. HAUGEN. I took it from your statement that the work you are now doing was on land in farming communities.

Mr. NELSON. With the regular appropriation we are working on the public land immediately adjoining the farms, as well as guiding the farmer in his work on his own lands. With the emergency money for stimulating the increased production of food, we desire to have funds to use both on these public lands and to use in connection with the cooperative funds put up by the communities in leading campaigns on both public and private lands.

Mr. HAUGEN. In North Dakota there is not very much public land.

Mr. NELSON. In North Dakota the funds for the very large and successful operations being carried on now are put up by the communities and we supply the expert guidance in cooperation with the State extension service. Our expert is guiding the work and showing the people how to do it, how to mix the poison, and how to distribute it.

The CHAIRMAN. All right, doctor, take up the next item, "Destruction of predatory animals."

Mr. NELSON. The predatory animals are mainly wolves, coyotes, mountain lions, and bobcats. The annual destruction of live stock by these animals mainly on the stock ranges totals more than $20,000,000. These animals live mainly on the national forests and other public lands. As an example of their destructiveness, I may mention a letter received yesterday from Senator Kendrick, transmitting an appeal for help from one of his constituents. The writer asked that the Government send a trapper to help destroy two wolves living on a national forest in Wyoming, which the people there have been unable to capture and which for several years have been killing about $2,000 worth of stock a year.

We have had similar requests from many other places. Last year in New Mexico a wolf killed 150 head in six months, valued at about $5,000. We put an expert trapper in there and it took about two months to get that wolf.

Another stock grower down there had similar losses from a wolf that had been doing heavy damage for years. One of our trappers was fortunate enough to capture the wolf on the second night.

The satisfactory feature in the destruction of these stock-killing animals is that every time one is killed it puts a definite end to the losses he would continue to cause if left alive. Since we began our campaign against predatory animals our men have killed more than 1,200 gray wolves and more than 51,000 coyotes. It is conservatively estimated that every wolf kills about $1,000 worth of live stock a year, so that our destruction of those 1,200 gray wolves has made an annual saving of at least $1,200,000 to the stockmen. Coyotes each kill an average of about $50 worth of stock yearly. The killing of 51,000 coyotes, therefore, means a still greater saving of stock and consequent increased meat production.

Mr. Stewart, chairman of the State Live Stock Board of Utah, last year made a survey of his State, and estimates that the sheep growers of Utah and adjoining parts of the surrounding States, where they

are interested, lose about 500,000 sheep yearly through these predatory animals. Dr. Crile, president of the Agricultural College of New Mexico, made a survey of his State last year, and estimated that New Mexico loses annually about 165,000 sheep and about 34,000 cattle through predatory animals. These losses are all preventable. State organizations and stockmen are putting up cooperative money, and they are asking for more help all the time, for much more help than our funds will permit us to give. The destruction of predatory animals on a wholesale scale and the resulting increase in the meat output is dependent on having the necessary funds.

The Biological Survey is demonstrating on a large scale that it is practicable to destroy predatory animals and noxious rodents at a moderate cost. A fully developed field organization is now at work, and the added appropriation asked here is for the purpose of expediting and increasing the control of these pests, and thus directly making a large increase in the meat and crop output in many States.

The CHAIRMAN. Are there any questions, gentlemen? If not, Doctor, I think we understand your work.

All right, gentlemen; turn to page 58, "Bureau of Crop Estimates." Mr. Murray, the assistant chief of that bureau, will tell us about that.

BUREAU OF CROP ESTIMATES.

STATEMENT OF MR. NAT C. MURRAY, ASSISTANT CHIEF, BUREAU OF CROP ESTIMATES, UNITED STATES DEPARTMENT OF AGRICULTURE.

The CHAIRMAN. For "Special work in crop estimating." We have an increase there of over $175,000 over the present allotment.

Mr. MURRAY. The main portion of this increase is to provide a moderate compensation to our county reporters. This past year the Food Administration has requested the bureau to give them much information in county details. The county men have been called upon to give so much information that it is difficult for us to maintain them, and it has been thought that sufficient compensation should be furnished to pay for such loss of time or inconvenience as they might be occasioned by getting the information requested.

The CHAIRMAN. You mean to say that this is really a salary increase for these men, Mr. Murray?

Mr. MURRAY. They are voluntary reporters at the present time; they receive no compensation. The purpose of asking that they be compensated is to enable us to make county estimates instead of State estimates. At the present time all of our estimates are by State units. We do not make county estimates, and the purpose of this is to go into greater details.

The CHAIRMAN. Just what do you propose to accomplish by this greater detail work?

Mr. MURRAY. To supply mainly the Food Administration and other National and State agencies with the information which they are calling for in the way of county as well as State estimates of production.

The CHAIRMAN. What does the Food Administration care where the production is, just so it is produced, whether it is produced in

Howard County, Ga., or whether it is produced in Carlisle County, Ga., just so they know it is produced in Georgia?

Mr. MURRAY. We have been in frequent communication with the Grain Corporation, who have requested us to furnish estimates not by States, but by counties, as to the production of wheat in the past year, and the councils of defence of the different States have been calling upon us for information, not alone for the entire States but for various portions of the States.

The CHAIRMAN. And then you make the statement that your county agent is really a voluntary agent?

Mr. MURRAY. Yes; county reporters are voluntary, and on the average we receive each month returns from only about 75 per cent of them. We do not get a report every month from all of our county reporters, which leaves some counties unrepresented.

The CHAIRMAN. What do you propose to pay these county agents for that service?

Mr. MURRAY. $50 a year.

The CHAIRMAN. They now get nothing?

Mr. MURRAY. They now get nothing.

The CHAIRMAN. How many of these county agents have you?

Mr. MURRAY. A little over 2,800; about 2,850.

The CHAIRMAN. You have a county agent in each of the rural counties?

Mr. MURRAY. Yes; all of the agricultural counties.

The CHAIRMAN. That would be 50 times 2,850?

Mr. MURRAY. $142,500 is involved.

The CHAIRMAN. I can not quite see myself the value of showing this production in so much detail. It seems to me that if Iowa is going to produce 10,000,000 bushels of wheat that ought to be sufficient. Why do they want to know which county produces it? What do they say about that at the Food Administration? What reason do they give for this new idea they have injected in here?

Mr. MURRAY. Well, I do not know their reasons for asking county details. I have never questioned them on that point. I presume it desires to know in what localities it can get wheat, and where to look for possible hoarding.

The CHAIRMAN. Mr. Harrison, can you give us some information on that?

Mr. HARRISON. No; I could not give specifically the reason why the Food Administration wants these county estimates, but I will be glad to insert it in the record. Mr. Estabrook, unfortunately, is not here to-day. He has been in touch with the Food Administration and could give you the reasons.

The CHAIRMAN. Suppose you put that in the record.

Mr. HARRISON. I shall be glad to do it.

The CHAIRMAN. I confess I do not see the reason for it.

Mr. HAUGEN. What is this $50 for? Is that for making a survey or to make estimates?

Mr. MURRAY. To make estimates.

Mr. HAUGEN. But you propose to make surveys as to the supply—to ascertain the supply on hand?

Mr. MURRAY. This is a part of the survey.

Mr. HAUGEN. And also as to live stock?

Mr. MURRAY. That includes live stock; yes.

Mr. HAUGEN. I understand the Bureau of Markets is doing that. That is what we were told yesterday.

Mr. MURRAY. At particular points, I think.

Mr. HAUGEN. Is it not possible to coordinate the work over there so that you could get it all under one head? It does not seem necessary to have it divided among several divisions.

Mr. MURRAY. The purpose of this project is to secure information as to the number of live stock in the country at particular times and dates.

Mr. HAUGEN. I mean these various surveys that are being made by different bureaus and different divisions all along the line. Would it not be better to coordinate the work or to turn it over to somebody, either the Census Bureau or some other department that has the matter in charge now and doing probably the same work?

Mr. MURRAY. The only county organization in the department now is the force of county agents, and there has been some question as to why the county agents can not be utilized for this purpose.

Mr. HAUGEN. You want the county agents, but you have them practically in every township, have you not?

Mr. MURRAY. We have only voluntary reporters in every township.

Mr. HAUGEN. They are voluntary, but they are in each county, are they not?

Mr. MURRAY. Yes.

Mr. HAUGEN. How many have you altogether?

Mr. MURRAY. We have on what we call our township list about 35,000 reporters.

Mr. HAUGEN. Has the number been increased or decreased? Have you had 35,000 all the time? Has the number increased or decreased?

Mr. MURRAY. We keep them about constant, between 30,000 and 35,000. The number of townships is about 33,000. The total number of voluntary reporters of all classes is about 175,000.

Mr. HAUGEN. Then you also have county reporters?

Mr. MURRAY. Our county reporters make estimates for their entire county; then we have these special men traveling over the States. We have at the present time one special agent in each State.

Mr. HAUGEN. You have had them all the time?

Mr. MURRAY. Yes.

Mr. HAUGEN. We made an appropriation some years ago for some special men; I think we started out with 14, did we not, besides the State agents?

Mr. MURRAY. Yes; truck and fruit specialists, I presume.

Mr. HAUGEN. In making estimates.

Mr. MURRAY. That is a different project involved in the collecting of truck and fruit crops, but there are not 14.

Mr. HAUGEN. It is crop estimates.

Mr. MURRAY. Yes.

Mr. HAUGEN. That is this item?

Mr. MURRAY. Yes.

Mr. HAUGEN. How many have you of those?

Mr. MURRAY. We have four truck crop and three fruit crop specialists; seven altogether.

Mr. HAUGEN. Have you not some estimating grain—corn and wheat?

Mr. MURRAY. No; we have no grain specialists.

Mr. HAUGEN. I understood you to say you had these specialists traveling over the country and advising. What do you take into consideration—the estimates furnished by the special men, the county men, and the township men? In making your estimates, what do you take into consideration; what reports do you have at hand?

Mr. MURRAY. We have reports from the State agents, one from each State, and we have a compilation from our county agents, and a compilation——

Mr. HAUGEN. Do the township reporters report to the county agents?

Mr. MURRAY. No.

Mr. HAUGEN. To whom do they report?

Mr. MURRAY. They report direct to Washington.

Mr. HAUGEN. Direct to Washington?

Mr. MURRAY. Yes, sir.

Mr. HAUGEN. Very well. Now, then, what do the State agents do?

Mr. MURRAY. The State agent reports direct to Washington; he makes a report for his entire State.

Mr. HAUGEN. What is his function; what investigation does he make?

Mr. MURRAY. His function is to collect information as to the acreage of the important crops.

Mr. HAUGEN. Through what source?

Mr. MURRAY. Through correspondence and travel.

Mr. HAUGEN. Travel and correspondence?

Mr. MURRAY. Yes, sir. Then, during the growing season they report each month on the condition of the important crops.

Mr. HAUGEN. How often do the township reporters report?

Mr. MURRAY. Monthly.

Mr. HAUGEN. Monthly here to Washington?

Mr. MURRAY. Yes, sir.

Mr. HAUGEN. And the county agents, monthly?

Mr. MURRAY. Yes, sir.

Mr. HAUGEN. When you have all of these reports, how are the estimates arrived at?

Mr. MURRAY. The state averages are obtained from all these three sources of information, which are brought together on sheets and compared by the statistician and his assistants.

Mr. HAUGEN. How much credit is given to each county reporter, State reporter, and special man?

Mr. MURRAY. I think, in practice, in matters of acreage, more weight is given to the field man. In matters of condition there is about equal value given to the three.

Mr. HAUGEN. Who are the field men?

Mr. MURRAY. The field men are these paid State agents.

Mr. HAUGEN. That is, one agent for each State?

Mr. MURRAY. One agent for each State. He is an employed representative of the bureau in the State.

Mr. HARRISON. Mr. Haugen, I understand that one of the principal reasons for getting the county reports is to know exactly what is produced in each county, so that the information may be available

to the State forces in conducting food-production campaigns, and also because the State authorities, especially those with whom we have cooperative agreements, such as Wisconsin and Missouri, as well as the farmers themselves, desire to have them for use in their operations.

Mr. MURRAY. We are constantly getting requests for information by counties.

Mr. HARRISON. And I understand the reason for paying these county reporters a small sum is that, during the past year, on account of the enormous demand for information regarding food production, acreage, conditions, and the like, it has been very difficult to retain the services of these men without some slight compensation to defray the additional expense to which they are put, for telephoning and things of that sort. If we are going to keep on asking them to make these reports, we have got to give them an amount sufficient to cover the expense to which they are put in securing the information.

Mr. HAUGEN. What I am interested in is in seeing these estimates improved upon. I am not finding fault with what they are doing, but I think that everybody would agree that the reports that we get now are absolutely unreliable.

Mr. HARRISON. I would suggest that it might save time if I would send you a little pamphlet, published by the department, which explains in detail the proceedure in making the estimates.

Mr. HAUGEN. We have a gentleman here from the bureau, and I presume he knows how it is done.

Mr. HARRISON. The pamphlet contains the information in concrete form, and I would be glad to send it to you, if you wish it.

Mr. HAUGEN. What I was interested in was in knowing how this $50 would improve the service. I know that the estimate as to the corn crop in Iowa two years ago was absolutely incorrect. There was nothing to it. Any blind man could make a better estimate than was made. That may not be the fault of the department or anyone here in Washington, but there is something radically wrong somewhere.

Mr. HARRISON. It was made on the basis of information secured from some of the best farmers in Iowa.

Mr. HAUGEN. How many farmers in Iowa reported? You have 99 county reporters and you could not find 50 farmers who would tell you that we have a corn crop in Iowa such as was reported. Our 1917 corn crop was light, due to early frost, still the report says that we have a corn crop. You can travel the whole State over and you can not find it. We neither had the corn nor the quality, and what is true of Iowa is true of other States. Statements are being made on the floor all the time in regard to the condition of the corn crop. The facts are we have no corn crop.

Mr. HARRISON. The object of this appropriation is, of course, to improve the service just as much as we can and to better enable the department to meet the emergency conditions. These men are now required to pay money out of their own pockets for telephone calls they have to make in getting in touch with the people in their communities before they send in their reports, and for various other items of incidental expense. This $50 is not intended as a salary; it is merely intended as reimbursement for expenses incurred by them.

Mr. CHANDLER. All they get now is a Yearbook and a crop report.

Mr. HARRISON. Mr. Lever, I would like to ask permission to have Mr. Estabrook insert in the record a detailed statement as to the reasons for this appropriation, and just what it is hoped to accomplish by it and specifically the necessity for having the county estimates.

The CHAIRMAN. Without objection, that will be done. Mr. Murray is not the Chief of the Bureau of Crop Estimates, but the statistician.

Mr. HAUGEN. He is familiar with the work, and he gave a vary clear statement as to what is being done. I am not criticizing the bureau, or anything of that kind, but it is a fact that the estimates made as to the corn are absolutely incorrect and are considered a joke by those having knowledge of the facts.

The CHAIRMAN. Is there anything further, Mr. Murray? If not, we are very much obliged to you, sir.

(Thereupon, at 12.52 o'clock p. m., the committee adjourned.)

STATEMENT RELATIVE TO THE EMERGENCY ESTIMATES OF THE BUREAU OF CROP ESTIMATES.

Question. Why should the Bureau of Crop Estimates have an emergency appropriation of $234,540 for 1919?

Answer. Because crop estimates are of vital importance to the Government and people of the United States during the war.

(1) The bureau's organization of 60 salaried field agents and 175,000 voluntary crop reporters—about 60 in each agricultural county—makes it the best, most systematic, complete, and effective crop-reporting agency in the world.

(2) The demand for crop and live-stock information as relating to the present and prospective food supply becomes increasingly urgent and widespread with the progress of the war.

(3) The regular annual appropriation is insufficient to enable the bureau to adequately meet the increasing demand for crop and live-stock information.

(4) Congress appropriates about $25,000,000 annually for the great work of the Department of Agriculture, and many more millions for the Food Administration, the State agricultural colleges and experiment stations, and for the subsistence of the military and naval forces of the United States.

The expenditure of these millions of public funds and the activities of the officials of the Federal and State Governments who are responsible for their expenditure are founded upon and guided very largely by agricultural data collected and published by the Bureau of Crop Estimates.

(5) The Department of Agriculture utilizes crop and live-stock estimates as follows:

(*a*) To determine whether old projects should be continued, extended, or discontinued.

(*b*) To determine whether or not new projects should be undertaken and whether on a small or a large scale.

(*c*) To estimate the annual losses to agriculture resulting from plant and animal diseases and insect pests.

(*d*) To measure the effectiveness of the department's work in stimulating agriculture as reflected in estimates of crop and live-stock production.

(*e*) To decide upon campaigns for stimulating production or improving methods of conservation, marketing, and distribution.

(*f*) To act as a clearing house for agricultural statistics and stabilize public confidence at a time when alarming reports are constantly being circulated.

(*g*) To determine the relative importance of projects and phases of the department's work as a guide in preparing the annual estimates of appropriations which are submitted to Congress.

(6) Particular bureaus of the Department of Agriculture utilize crop estimates as follows:

(*a*) Whenever the Bureau of Soils undertakes a soil survey the chief of that bureau calls for a statement showing the acreage, production, and value of crops grown and the numbers of live stock in each county to be surveyed, in order that crop production and values may be correlated with soil types.

(*b*) Whenever the Bureau of Plant Industry outlines a new project, whether it be for the development of a new crop or a crop in a particular section, or

for better means for overcoming plant diseases, the specialists of that bureau naturally study all the statistics available to ascertain or show the extent and value of the crop in the United States, or in the State or group of States where the investigation is proposed to be carried on, the exports and imports, the estimated losses from plant diseases, and the amount of improvement or increase in production and value that may reasonably be expected to result.

(*c*) Whenever the Bureau of Animal Industry considers any program for stimulating live-stock production or for the prevention of losses from disease or other causes, it must necessarily take into consideration such estimates of live stock, available supply and cost of feed stuffs, losses from diseases, present and prospective prices, etc.

(*d*) Whenever the Bureau of Entomology considers a program of work or estimates of appropriation for combating certain insect pests it is necessary for the specialists of that bureau to have data as to the extent of the annual losses caused by those insects.

(*e*) The Bureau of Chemistry is interested in estimates not only of food production of staple crops and live-stock and animal products, but also of the crops from which edible oils are extracted.

(*f*) The Bureau of Public Roads is interested in knowing the tonnage of crops that have to be moved from farms over country roads to the nearest market or shipping point, and the average length of haul.

(*g*) The Forest Service is interested in knowing the production and consumption of wood as fuel on farms, and such estimates are made by the Bureau of Crop Estimates.

(*h*) The Office of Farm Management is able to utilize much of the data collected by the Bureau of Crop Estimates in its farm-management studies.

(*i*) The States Relations Service, which deals with the extension forces in each State, including the force of county agents, in carrying out campaigns for better methods and increased production on farms, utilizes the estimates of the Bureau of Crop Estimates for both stimulating agriculture and for checking up results of campaigns. For instance, Dr. Knapp and his assistants are able to show the need for increased food and feed production in the South, and then as the annual estimates are issued he is able to measure the extent to which agriculture in the South has increased along lines advocated by the extension forces.

(*j*) But, above all, the estimates of the Bureau of Crop Estimates are at the foundation of the Bureau of Markets. The Bureau of Markets deals with the surplus farm products which are sold off the farms and which enter the channels of trade. Just as estimates of past, present, and prospective acreage and production are essential to an intelligent program for increasing crop production and for effectively combating plant and animal diseases and insect pests, so estimates of crop and live-stock production on farms and supplies on farms are essential to intelligent campaigns for marketing and distributing the surplus products of the farms.

(*k*) Whenever a conference of bureau chiefs and specialists is called by the Secretary or Assistant Secretaries to discuss and decide upon an agricultural program or policy for the coming year or to meet a particular emergency the estimates of past, present, and prospective crop and live-stock production are consulted and utilized as a guide.

(7) Other organizations which use crop estimates:

(*a*) In the same way the activities of the State agricultural colleges and experiment stations, including the extension forces of the State, make constant use of the estimates of the bureau as well as such additional data as may be collected by their own forces.

(*b*) The Council of National Defense, the Food Administration, and the War Trade Board all utilize information furnished by the Bureau of Crop Estimates, both as relates to the past, present, and prospective food and feed supply of the United States and as to the probable supply in foreign countries.

(*c*) The data collected by the Bureau of Crop Estimates are used far more than most people realize by State and local organizations and by the press of the United States in any discussion of crop and live stock production and the supply of food and raw materials available or likely to be available. Much of the statistical information purporting to have been issued by State and local organizations as their own is really the estimates—or founded on the estimates—of the bureau. Many of the State boards of agriculture, which make periodical crop and live stock reports, either utilize the exact figures of the bureau or slightly modify them and issue them as their own.

The point I wish to make clear is that one of the most important factors at the foundation of nearly every branch of the Department of Agriculture and at the foundation of nearly every estimate of appropriation which is submitted to the committee in Congress that is back of every campaign to increase crop production, or the better marketing and distribution of crops, is the information supplied by the Bureau of Crop Eestimates.

Furthermore, it should constantly be borne in mind that the Bureau of Crop Estimates has the most complete and efficient organization for securing quickly the consensus of opinion on farms relative to any phase of agriculture. It has 60 field agents and crop specialists in the field who are trained observers and who are in touch with the best sources of information in each State, and it has a force of 175,000 voluntary reporters, which is about 60 per county, who are accumstomed to reporting periodically to the bureau. Information which is State wide or country wide can be obtained from these agents and reporters within a few hours or days, depending on whether the request is made by letter, by telephone, or by telegraph, and depending also on the degree of throughness and accuracy that is deemed necessary. If the Secretary of Agriculture, or the Food Administration, or the Council of National Defense wants to verify or disprove quickly a newspaper rumor to the effect that breeding stock is being sold from farms for slaughter to an extent which will endanger the meat supply, or the milk supply, or the wool supply next year, the Bureau of Crop Estimates can telegraph its field agents and within 24 hours be able to state with a fair degree of accuracy whether the report of alleged excessive slaughter is or is not correct for any particular State or all the States. This is simply one illustration of how this great farm news-gathering agency of the Bureau of Crop Estimates has been used repeatedly during the past year and will be used during the continuance of the war.

Having stated that the organization and the funds of the bureau were barely adequate to handle the increasing volume of work prior to the entrance of the United States in the war, that the allotment of $58,000 emergency funds for the present fiscal year has been necessary to partially meet the increased demands upon the bureau since the United States entered the war, and having pointed out the fundamental importance of crop and live stock estimates in connection with many of the activities of the Department of Agriculture and of the Food Administration during the continuance of the war, I will now state how it is proposed to utilize the large increases asked for in the emergency funds for next year:

The first item in the estimated increase is an additional allowance of $300 for each of the 42 field agents of the bureau, amounting to $12,600. Each of these field agents has an annual allowance of about $1,200 for travel and office expenses. Judging by the past year it is apparent that at least $25 per month additional should be allowed for extra travel in connection with special inquiries which the field agents will be called upon to answer. This extra $25 per month may be used for getting information by telephone, or telegraph, or for an extra trip in the State each month, or for the hire of automobiles on each trip to enable the agent to cover his territory more thoroughly and effectively.

The second item included in the estimate is an allowance of $900 for clerk hire in the office of each of the 42 field agents, amounting to $37,800. You will note that this is $75 per month for a clerk at a time when it is exceedingly difficult to get competent clerks for less than $100 per month. In the present emergency allotment many of the field agents have employed clerks for part time, or they have employed beginners at $50 to $100 per month for a few months. The present arrangement is entirely inadequate. The full time of a competent clerk in the office of each field agent is necessary to handle the growing correspondence, the additional number of special reports, to send out schedules and to compile data continuously during the month while the field agent is traveling. It is impracticable for the field agent to do this routine clerical work and attend to his duties as a field agent at the same time, and it would be a waste of time and energy to require a salaried field agent to do it.

The largest single item of increase is an estimate of $50 per annum for 2,850 county crop reporters, amounting to a total of $142,500, which is at the rate of $5 per month for 10 months for a reporter in each of the agricultural counties in the United States.

Among the 175,000 voluntary crop reporters who serve the bureau without compensation are two classes which are called upon more frequently and with greater regularity than all other classes combined, namely, the 3,000 county reporters and 32,000 township reporters. Experience has demonstrated that

these classes will respond on the average for from 60 to 70 per cent of the total number. Each class of reporters is treated as a separate and distinct source of information, and each of these is a check on the other and on the reports of the field agents. The percentage of returns received from the voluntary crop reporters is usually proportionate to the number of requests; that is, if the number of requests per month is increased, the number of returns will decrease because the work becomes burdensome and reporters lose patience or become tired of reporting, or feel that they can not devote the time and effort, and we lose them rapidly. If a township reporter fails to send in a report or drops out and we have to get a new man to take his place, no harm is done because there will be enough reports from surrounding townships to make a correct average; but if a county reporter fails to report, his county is not represented in the State average, and conditions in adjoining counties may not be representative of his county. Also in States where the bureau has attempted to issue crop reports on a county basis it is essential that a report be received from every county. To maintain the list of township reporters and also to economize in the clerical work of tabulating in the central office, it is believed to be expedient to send most of the special inquiries to the county list and field agents only, without troubling the township reporters. This makes it all the more important that the county list should be maintained.

The county reporters are believed to be more intelligent and better informed as a class by reason of the manner of their selection, their knowledge of county-wide conditions and their experience in reporting on the county as a whole. They are usually men who reported most regularly as township reporters, or who were recommended by a township reporter, or by the field agent of the bureau, or some other well-informed person. They are usually located at or near the county seat, meet farmers or are in touch with farmers by telephone over the county, and they have other farmers report to them for different sections of the county. Most of these county reporters are busy men and their time is valuable. They enlisted in the voluntary services of the bureau on the understanding that they were to furnish the bureau with one crop report each month. To call upon them to make up one or more special reports every month, each requiring special investigation or inquiry, in addition to their regular monthly report, is asking a good deal. It is more than we can rightly expect from county reporters. Many will respond, of course, as a matter of patriotic and public-spirited duty. But many others will either ignore the requests or resign. We can not require them to make the reports, nor can we offer them any inducement to make the reports or compensate them for time lost or expense of telephoning under present conditions.

It therefore seems highly desirable that the bureau should have a representative in each county, regularly appointed and paid a salary, however small, who will be under obligation to answer the inquiries of the bureau for his county, and who will be compensated in part at least for his loss of time and for his trouble. The compensation we have in mind, $5 per month, is fair wages for one day. It is purposely made small so that it will not attract to the service men whose only interest in the matter will be the compensation and not the services to be rendered. If the compensation were $25 or more per month, we might expect competition for the appointment by men without special qualifications for the work to arise within counties, which might be embarrassing both to the department and to Congress. It seems to me that men who have served the bureau as county reporters for several years without compensation and who are experienced in collecting information and answering inquiries, should receive preference in appointment. At the same time, if this item is allowed, the bureau would check up its county reporters more closely with a view to strengthening its list and obtaining better men where necessary.

A very natural question would be: Why does not the Bureau of Crop Estimates utilize the county agents of the extension forces in the States Relations Service? There are three principal reasons why this should not be done: (1) The county agents are already overburdened with the work of stimulating agriculture and encouraging farmers to adopt better methods of farming, and they have little or no time for making crop reports or reports on special inquiries; (2) many county agents are not interested in the statistical side of agriculture and hardly know how to go about collecting the desired information; and (3) county agents are by nature and by training inclined to be too optimistic; that is, they are usually dealing with the more progressive and better farmers of their counties, their attention is focused on the best types of farming in their counties, they are more familiar with the highest yields in their counties, and their summary of county-wide conditions is apt to be much higher than the

average. Crop reporting is entirely distinct from crop rotation, farm management, and other details of practical farm operations, for which reason it is believed that better results for less money can be obtained by having an independent crop reporter in each county who will report directly to the Bureau of Crop Estimates without interfering with other and perhaps more important work for another branch of the department and of the State. As a matter of fact, there is in most States very close cooperation between the county agents of the extension service and the field agents of the Bureau of Crop Estimates, but this cooperation is largely in the form of interviews which occur not oftener than once a month and which take but little time on the part of the county agents. But when information is wanted quickly regarding conditions in each county, it is impracticable for the bureau to utilize county agents one or more times a month for that purpose, and it can not expect satisfactory results from unpaid volunteers. The small monthly payment of $5 would not compensate the county reporters for the time lost and work involved, but the fact that they receive this partial monetary compensation, together with the fact that an official appointment would be issued in each case and their names placed on the pay roll of the department, would make them feel that they were employees of the Department of Agriculture and that their services were of value to the country.

Perhaps the most important reason for making the county reporters employees of the department and insuring regular reports from each county is the necessity, which has been greatly intensified by the war emergency, of having estimates made up by counties. These county reporters and the clerks in the offices of the field agents will enable the bureau in each State to make crop estimates by counties. Information by counties has always been in great demand, but the bureau has never been able to adopt the county as a basis for estimating because of lack of funds and force. The Food Administration, especially the grain corporation branch, insists that county estimates be furnished in order that they may know how much grain is produced and stored in or shipped out of each county, to locate supplies, distribute them more economically, and to check hoarding. It requires vastly more time and work to estimate the details of crop production for 3,000 counties separately than it does to estimate totals for only 48 States.

Last fall, when the department and State organizations were cooperating to provide sufficient storage facilities for conserving the unusual surplus from the large potato crop in the Northern States, the bureau furnished county estimates of production and existing storage space available, at the special request of the horticulturist of the Bureau of Plant Industry. Requests have been made by specialists on seed, clover, and other crops for estimates by counties. Calls for county estimates are frequently made by chambers of commerce, and denied for lack of adequate force and funds.

The next item in the estimate is $16,160 for clerical assistance in the Washington office. Of the emergency allotment this year, approximately $9,000 will be spent for clerk hire in Washington. The present force is inadequate, and to handle effectively the progressive increase in the demands upon the bureau it will be necessary to nearly double the allotment for this purpose next year. The many emergency inquiries, which the bureau is called upon to make, are usually urgent and unless additional clerks are provided the results of such special inquiries are delayed after the returns are received from the field.

The item of $4,000 for stationery and supplies is $4,000 less than the expenditures for the same purpose this year, and may not be enough. This saving of about 40 per cent will result from confining most of the special inquiries to the county reporters, 3,000 in number, instead of sending the inquiries to the township list, 32,000 in number, and to the other special lists as was done last year. This saving is, therefore, dependent upon granting compensation to the county crop reporters in order to insure that replies shall be received for all important counties.

The last item is $21,480 for the truck-crop work. The growing of truck crops is a highly specialized and hazardous industry in that it is difficult to so regulate planting and production as to avoid an undersupply or an oversupply; and garden vegetables for shipment are important during the continuance of the war, because the consumption of these vegetables saves wheat and other bread grains. It is important, therefore, that the growers have prompt and dependable information on the progress of planting and of prospective yields, in order that plantings in competing sections may be modified, and such information is very essential to the Bureau of Markets in planning its campaigns for the marketing and distribution of these perishable crops. For this reason the bureau

established last fall a weekly truck-crop news service to supplement the market news service, and detailed reports on the planting condition and harvesting of truck crops are now issued regularly every week.

To properly cover the truck-growing regions it is necessary to have two additional truck-crop specialists at $1,800 per annum and to allow $2,500 each for necessary travel.

For the weekly truck-crop news service to be of value, it is necessary to appoint competent and well-informed men in about 25 important localities to report directly to the bureau weekly by telegraph truck-crop conditions in their districts during the previous week. It is proposed to pay these men not to exceed $300 per annum. Of course, $25 per month for men of this character is not full compensation for full time, but is intended only to pay them for one day each week in collecting data, use of the telephone, and for making up a report. In every case they will be among the best informed men in the trucking business in their districts.

The item of $4,080 for clerical assistance in the truck-crop section is for additional clerks at the Washington office and is absolutely necessary to enable the section to handle the greatly increased volume of work incident to the weekly truck-crop news service.

The item of $1,300 for telegraph, which is a little more than $100 a month, is essential to the success of the weekly truck-crop news service, as without the use of the telegraph it would be impracticable to make weekly reports of value to the growers, the dealers, and to the Bureau of Markets.

In conclusion attention is called to the fact that our estimates of additional funds for the Bureau of Crop estimates aggregating $234,500, which will be used to protect the crop-reporting service for all crops and classes of live stock, is only a small percentage of the amount of additional funds asked for by other bureaus of the department for investigating and reporting upon various phases of crop production, conservation, marketing, and distribution, all of which activities are based to some extent upon the estimates of this bureau It is less than 10 per cent of the cost of the decennial census of agriculture, and less than the annual cost of reporting cotton ginned.

The following statement shows, by projects, the allotment of funds made by the Secretary of Agriculaure from the $650,000 appropriation provided by the food-production act of August 10, 1917, "for miscellaneous items, including the salaries of assistant secretaries appointed under this act; special work in crop estimating; aiding agencies in the various States in supplying farm labor; enlarging the informational work of the Department of Agriculture; and printing and distributing emergency leaflets posters, and other publications requiring quick issue or large editions":

Allotment of funds, by projects, under the food production act of August 10, 1917.

Project.	Original allotted.		Increase.		Total allotment.
	Amount.	Date.	Amount.	Date.	
General administration (office of the Secretary)	$75,000.00	Aug. 11, 1917			$75,000.00
Publication and informational work	235,367.00	Aug. 17, 1917			235,367.00
Agricultural exhibits	7,900.00	Aug. 27, 1917			7,900.00
Rent	15,000.00	Aug. 11, 1917			15,000.00
Assistance in supplying farm labor	97,250.00	Aug. 31, 1917			97,250.00
Bureau of Chemistry:					
1. Poultry and egg demonstrations	20,000.00	Oct. 6, 1917			20,000.00
2. Sirup demonstrations	7,000.00	Aug. 30, 1917			7,000.00
3. Handling, transportation, and storage of fish	11,000.00	do	$4,000.00	Feb. 16, 1918	15,000.00
Bureau of Entomology:					
1. Extension work in bee-keeping	15,000.00	Sept. 27, 1917			15,000.00
Bureau of Biological Survey:					
1. Control of noxious rodents	5,000.00	Nov. 22, 1917	$12,000.00 11,000.00	Feb. 1, 1918 Mar. 2, 1918	28,000.00
2. Destruction of predatory animals	20,000.00	do	14,000.00	do	34,000.00
Bureau of Crop Estimates:					
1. Special work in crop estimating	37,454.90	Aug. 25, 1917	641.25 2,640.00 9,923.05 8,125.00	Nov. 22, 1917 Dec. 12, 1917 Jan. 30, 1918 Mar. 7, 1918	58,784.20

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